

=> file caplus

FILE 'CAPLUS' ENTERED AT 17:36:24 ON 17 JUN 2002
 USE IS SUBJECT TO THE TERMS OF YOUR STN CUSTOMER AGREEMENT.
 PLEASE SEE "HELP USAGETERMS" FOR DETAILS.
 COPYRIGHT (C) 2002 AMERICAN CHEMICAL SOCIETY (ACS)

Copyright of the articles to which records in this database refer is held by the publishers listed in the PUBLISHER (PB) field (available for records published or updated in Chemical Abstracts after December 26, 1996), unless otherwise indicated in the original publications.

The CA Lexicon is the copyrighted intellectual property of the American Chemical Society and is provided to assist you in searching databases on STN. Any dissemination, distribution, copying, or storing of this information, without the prior written consent of CAS, is strictly prohibited.

FILE COVERS 1907 - 17 Jun 2002 VOL 136 ISS 25
 FILE LAST UPDATED: 16 Jun 2002 (20020616/ED)

This file contains CAS Registry Numbers for easy and accurate substance identification.

CAS roles have been modified effective December 16, 2001. Please check your SDI profiles to see if they need to be revised. For information on CAS roles, enter HELP ROLES at an arrow prompt or use the CAS Roles thesaurus (/RL field) in this file.

=> d que L7

L1	2573 SEA FILE=CAPLUS ABB=ON PLU=ON STARCH (3A) OXIDI?
L2	1 SEA FILE=REGISTRY ABB=ON PLU=ON HYDROGEN PEROXIDE/CN
L3	62287 SEA FILE=CAPLUS ABB=ON PLU=ON L2
L4	147980 SEA FILE=CAPLUS ABB=ON PLU=ON L3 OR H2O2
L5	114 SEA FILE=CAPLUS ABB=ON PLU=ON L1 AND L4
L6	773 SEA FILE=CAPLUS ABB=ON PLU=ON TAPIOCA (2A) STARCH
L7	1 SEA FILE=CAPLUS ABB=ON PLU=ON L5 AND L6

=> d que L13

L1	2573 SEA FILE=CAPLUS ABB=ON PLU=ON STARCH (3A) OXIDI?
L2	1 SEA FILE=REGISTRY ABB=ON PLU=ON HYDROGEN PEROXIDE/CN
L3	62287 SEA FILE=CAPLUS ABB=ON PLU=ON L2
L4	147980 SEA FILE=CAPLUS ABB=ON PLU=ON L3 OR H2O2
L5	114 SEA FILE=CAPLUS ABB=ON PLU=ON L1 AND L4
L8	9094 SEA FILE=CAPLUS ABB=ON PLU=ON POTATO (2A) STARCH
L9	16 SEA FILE=CAPLUS ABB=ON PLU=ON L5 AND L8
L12	2050783 SEA FILE=CAPLUS ABB=ON PLU=ON CATION? OR ANION? OR ION? OR AMPHOTERIC
L13	5 SEA FILE=CAPLUS ABB=ON PLU=ON L9 AND L12

=> d que L15

L1	2573 SEA FILE=CAPLUS ABB=ON PLU=ON STARCH (3A) OXIDI?
L2	1 SEA FILE=REGISTRY ABB=ON PLU=ON HYDROGEN PEROXIDE/CN
L3	62287 SEA FILE=CAPLUS ABB=ON PLU=ON L2
L4	147980 SEA FILE=CAPLUS ABB=ON PLU=ON L3 OR H2O2
L5	114 SEA FILE=CAPLUS ABB=ON PLU=ON L1 AND L4
L14	5067 SEA FILE=CAPLUS ABB=ON PLU=ON BINDER AND ((PAPER OR SURFACE) (3A) COATING)
L15	4 SEA FILE=CAPLUS ABB=ON PLU=ON L5 AND L14

*Additional background search on oxidized starch made by process known in the art and limitations of claims 5-7 and 11-18.
 These claim limitations of claim 1 (H_2O_2 & Cu^{2+}) not included*

Point of Contact:
 Thomas G. Larson, Ph.D.
 703-308-7309
 CM1, Rm. 6 B 01

=> d que L18

L1	2573 SEA FILE=CAPLUS ABB=ON PLU=ON STARCH (3A) OXIDI?
L2	1 SEA FILE=REGISTRY ABB=ON PLU=ON HYDROGEN PEROXIDE/CN
L3	62287 SEA FILE=CAPLUS ABB=ON PLU=ON L2
L4	147980 SEA FILE=CAPLUS ABB=ON PLU=ON L3 OR H2O2
L5	114 SEA FILE=CAPLUS ABB=ON PLU=ON L1 AND L4
L16	161577 SEA FILE=CAPLUS ABB=ON PLU=ON ADHESIVE
L17	26 SEA FILE=CAPLUS ABB=ON PLU=ON L5 AND L16
L18	9 SEA FILE=CAPLUS ABB=ON PLU=ON L17 AND CATALYST

=> d que L20

L1	2573 SEA FILE=CAPLUS ABB=ON PLU=ON STARCH (3A) OXIDI?
L2	1 SEA FILE=REGISTRY ABB=ON PLU=ON HYDROGEN PEROXIDE/CN
L3	62287 SEA FILE=CAPLUS ABB=ON PLU=ON L2
L4	147980 SEA FILE=CAPLUS ABB=ON PLU=ON L3 OR H2O2
L5	114 SEA FILE=CAPLUS ABB=ON PLU=ON L1 AND L4
L19	855 SEA FILE=CAPLUS ABB=ON PLU=ON YARN (3A) SIZING
L20	0 SEA FILE=CAPLUS ABB=ON PLU=ON L5 AND L19

=> d que L22

L1	2573 SEA FILE=CAPLUS ABB=ON PLU=ON STARCH (3A) OXIDI?
L10	2527372 SEA FILE=CAPLUS ABB=ON PLU=ON DERIV? OR MODIFI?
L19	855 SEA FILE=CAPLUS ABB=ON PLU=ON YARN (3A) SIZING
L21	13 SEA FILE=CAPLUS ABB=ON PLU=ON L1 AND L19
L22	5 SEA FILE=CAPLUS ABB=ON PLU=ON L21 AND L10

=> d que L24

L1	2573 SEA FILE=CAPLUS ABB=ON PLU=ON STARCH (3A) OXIDI?
L2	1 SEA FILE=REGISTRY ABB=ON PLU=ON HYDROGEN PEROXIDE/CN
L3	62287 SEA FILE=CAPLUS ABB=ON PLU=ON L2
L4	147980 SEA FILE=CAPLUS ABB=ON PLU=ON L3 OR H2O2
L5	114 SEA FILE=CAPLUS ABB=ON PLU=ON L1 AND L4
L23	78888 SEA FILE=CAPLUS ABB=ON PLU=ON GLASS (2W) FIBER
L24	1 SEA FILE=CAPLUS ABB=ON PLU=ON L5 AND L23

=> d que L26

L1	2573 SEA FILE=CAPLUS ABB=ON PLU=ON STARCH (3A) OXIDI?
L23	78888 SEA FILE=CAPLUS ABB=ON PLU=ON GLASS (2W) FIBER
L25	18 SEA FILE=CAPLUS ABB=ON PLU=ON L1 AND L23
L26	4 SEA FILE=CAPLUS ABB=ON PLU=ON L25 AND COATING

=> d que L28

L1	2573 SEA FILE=CAPLUS ABB=ON PLU=ON STARCH (3A) OXIDI?
L2	1 SEA FILE=REGISTRY ABB=ON PLU=ON HYDROGEN PEROXIDE/CN
L3	62287 SEA FILE=CAPLUS ABB=ON PLU=ON L2
L4	147980 SEA FILE=CAPLUS ABB=ON PLU=ON L3 OR H2O2
L5	114 SEA FILE=CAPLUS ABB=ON PLU=ON L1 AND L4
L27	2099 SEA FILE=CAPLUS ABB=ON PLU=ON (ABRASIVE OR SAND OR EMERY) (2A) PAPER OR SANDPAPER
L28	0 SEA FILE=CAPLUS ABB=ON PLU=ON L5 AND L27

=> d que L31

L1 2573 SEA FILE=CAPLUS ABB=ON PLU=ON STARCH (3A) OXIDI?
 L27 2099 SEA FILE=CAPLUS ABB=ON PLU=ON (ABRASIVE OR SAND OR EMERY)
 (2A) PAPER OR SANDPAPER
 L29 9 SEA FILE=CAPLUS ABB=ON PLU=ON L1 AND L27
 L31 8 SEA FILE=CAPLUS ABB=ON PLU=ON L29 AND (ADHESIVE OR COATING
 OR ADDITIVE)

=> d que L33

L1 2573 SEA FILE=CAPLUS ABB=ON PLU=ON STARCH (3A) OXIDI?
 L2 1 SEA FILE=REGISTRY ABB=ON PLU=ON HYDROGEN PEROXIDE/CN
 L3 62287 SEA FILE=CAPLUS ABB=ON PLU=ON L2
 L4 147980 SEA FILE=CAPLUS ABB=ON PLU=ON L3 OR H2O2
 L5 114 SEA FILE=CAPLUS ABB=ON PLU=ON L1 AND L4
 L32 19 SEA FILE=CAPLUS ABB=ON PLU=ON BLANKET(3A) ADHESIVE
 L33 0 SEA FILE=CAPLUS ABB=ON PLU=ON L5 AND L32

=> d que L34

L1 2573 SEA FILE=CAPLUS ABB=ON PLU=ON STARCH (3A) OXIDI?
 L32 19 SEA FILE=CAPLUS ABB=ON PLU=ON BLANKET(3A) ADHESIVE
 L34 0 SEA FILE=CAPLUS ABB=ON PLU=ON L1 AND L32

=> d que L36

L1 2573 SEA FILE=CAPLUS ABB=ON PLU=ON STARCH (3A) OXIDI?
 L35 36 SEA FILE=CAPLUS ABB=ON PLU=ON BLANKET(3A) (ADHESIVE OR GLUE
 OR BINDER OR SIZING)
 L36 0 SEA FILE=CAPLUS ABB=ON PLU=ON L1 AND L35

=> d que L38

L1 2573 SEA FILE=CAPLUS ABB=ON PLU=ON STARCH (3A) OXIDI?
 L2 1 SEA FILE=REGISTRY ABB=ON PLU=ON HYDROGEN PEROXIDE/CN
 L3 62287 SEA FILE=CAPLUS ABB=ON PLU=ON L2
 L4 147980 SEA FILE=CAPLUS ABB=ON PLU=ON L3 OR H2O2
 L5 114 SEA FILE=CAPLUS ABB=ON PLU=ON L1 AND L4
 L37 434316 SEA FILE=CAPLUS ABB=ON PLU=ON FOOD OR FEED
 L38 7 SEA FILE=CAPLUS ABB=ON PLU=ON L5 AND L37

=> d que L45

L1 2573 SEA FILE=CAPLUS ABB=ON PLU=ON STARCH (3A) OXIDI?
 L2 1 SEA FILE=REGISTRY ABB=ON PLU=ON HYDROGEN PEROXIDE/CN
 L3 62287 SEA FILE=CAPLUS ABB=ON PLU=ON L2
 L4 147980 SEA FILE=CAPLUS ABB=ON PLU=ON L3 OR H2O2
 L5 114 SEA FILE=CAPLUS ABB=ON PLU=ON L1 AND L4
 L39 30 SEA FILE=CAPLUS ABB=ON PLU=ON ALKYL SUCCINIC ANHYDRIDE
 L42 343 SEA FILE=CAPLUS ABB=ON PLU=ON ALKYL KETENE (3A) DIMER
 L43 772 SEA FILE=CAPLUS ABB=ON PLU=ON ALKYL ISOCYANATE
 L44 1143 SEA FILE=CAPLUS ABB=ON PLU=ON L39 OR L42 OR L43
 L45 1 SEA FILE=CAPLUS ABB=ON PLU=ON L5 AND L44

=> d que L46

L1 2573 SEA FILE=CAPLUS ABB=ON PLU=ON STARCH (3A) OXIDI?
 L39 30 SEA FILE=CAPLUS ABB=ON PLU=ON ALKYL SUCCINIC ANHYDRIDE
 L42 343 SEA FILE=CAPLUS ABB=ON PLU=ON ALKYL KETENE (3A) DIMER
 L43 772 SEA FILE=CAPLUS ABB=ON PLU=ON ALKYL ISOCYANATE
 L44 1143 SEA FILE=CAPLUS ABB=ON PLU=ON L39 OR L42 OR L43

L46 11 SEA FILE=CAPLUS ABB=ON PLU=ON L1 AND L44

=> s 17 or l13 or l15 or l18 or 120 or 122 or 124 or 126 or 128 or 131 or 133 or
134 or 136 or 138 or 145 or 146

L87 47 L7 OR L13 OR L15 OR L18 OR L20 OR L22 OR L24 OR L26 OR L28 OR
L31 OR L33 OR L34 OR L36 OR L38 OR L45 OR L46

=> file wpids
FILE 'WPIDS' ENTERED AT 17:39:46 ON 17 JUN 2002
COPYRIGHT (C) 2002 THOMSON DERWENT

FILE LAST UPDATED: 13 JUN 2002 <20020613/UP>
MOST RECENT DERWENT UPDATE 200237 <200237/DW>
DERWENT WORLD PATENTS INDEX SUBSCRIBER FILE, COVERS 1963 TO DATE

>>> The BATCH option for structure searches has been
enabled in WPINDEX/WPIDS and WPIX >>>

>>> PATENT IMAGES AVAILABLE FOR PRINT AND DISPLAY >>>

>>> FOR DETAILS OF THE PATENTS COVERED IN CURRENT UPDATES,
SEE [<http://www.derwent.com/dwpi/updates/dwpicov/index.html>](http://www.derwent.com/dwpi/updates/dwpicov/index.html)

>>> FOR A COPY OF THE DERWENT WORLD PATENTS INDEX TOOLS OF THE
TRADE USER GUIDE, PLEASE VISIT:
[<http://www.derwent.com/data/stn3.pdf>](http://www.derwent.com/data/stn3.pdf)

>>> FOR INFORMATION ON ALL DERWENT WORLD PATENTS INDEX USER
GUIDES, PLEASE VISIT:
[<http://www.derwent.com/userguides/dwpi_guide.html>](http://www.derwent.com/userguides/dwpi_guide.html)

=> d que 156

L48	612 SEA FILE=WPIDS ABB=ON	PLU=ON	STARCH (3A) OXIDI?
L50	439 SEA FILE=WPIDS ABB=ON	PLU=ON	TAPIOCA (2A) STARCH
L52	14 SEA FILE=WPIDS ABB=ON	PLU=ON	L48 AND L50
L53	1885 SEA FILE=WPIDS ABB=ON	PLU=ON	POTATO (2A) STARCH
L55	44 SEA FILE=WPIDS ABB=ON	PLU=ON	L48 AND L53
L56	10 SEA FILE=WPIDS ABB=ON	PLU=ON	L52 AND L55

=> d que 159

L47	25706 SEA FILE=WPIDS ABB=ON	PLU=ON	HYDROGEN PEROXIDE OR HYDROGEN PER OXIDE OR H ₂ O ₂
L48	612 SEA FILE=WPIDS ABB=ON	PLU=ON	STARCH (3A) OXIDI?
L49	19 SEA FILE=WPIDS ABB=ON	PLU=ON	L47 AND L48
L57	325599 SEA FILE=WPIDS ABB=ON	PLU=ON	CATION? OR ANION? OR ION? OR AMPHOTERIC
L59	3 SEA FILE=WPIDS ABB=ON	PLU=ON	L49 AND L57

=> d que 161

L47	25706 SEA FILE=WPIDS ABB=ON	PLU=ON	HYDROGEN PEROXIDE OR HYDROGEN PER OXIDE OR H ₂ O ₂
L48	612 SEA FILE=WPIDS ABB=ON	PLU=ON	STARCH (3A) OXIDI?
L49	19 SEA FILE=WPIDS ABB=ON	PLU=ON	L47 AND L48
L60	5609 SEA FILE=WPIDS ABB=ON	PLU=ON	BINDER AND ((PAPER OR SURFACE) (3A) COATING)
L61	1 SEA FILE=WPIDS ABB=ON	PLU=ON	L49 AND L60

=> d que 164

L47	25706	SEA FILE=WPIDS ABB=ON	PLU=ON	HYDROGEN PEROXIDE OR HYDROGEN PER OXIDE OR H ₂ O ₂
L48	612	SEA FILE=WPIDS ABB=ON	PLU=ON	STARCH (3A) OXIDI?
L49	19	SEA FILE=WPIDS ABB=ON	PLU=ON	L47 AND L48
L63	258615	SEA FILE=WPIDS ABB=ON	PLU=ON	ADHESIVE
L64	6	SEA FILE=WPIDS ABB=ON	PLU=ON	L49 AND L63

=> d que 166

L48	612	SEA FILE=WPIDS ABB=ON	PLU=ON	STARCH (3A) OXIDI?
L65	415	SEA FILE=WPIDS ABB=ON	PLU=ON	YARN (3A) SIZING
L66	3	SEA FILE=WPIDS ABB=ON	PLU=ON	L48 AND L65

=> d que 169

L48	612	SEA FILE=WPIDS ABB=ON	PLU=ON	STARCH (3A) OXIDI?
L67	4826	SEA FILE=WPIDS ABB=ON	PLU=ON	GLASS (2W) FIBER
L69	2	SEA FILE=WPIDS ABB=ON	PLU=ON	L48 AND L67

=> d que 171

L48	612	SEA FILE=WPIDS ABB=ON	PLU=ON	STARCH (3A) OXIDI?
L70	1413	SEA FILE=WPIDS ABB=ON	PLU=ON	(ABRASIVE OR SAND OR EMERY) (2A) PAPER OR SANDPAPER
L71	2	SEA FILE=WPIDS ABB=ON	PLU=ON	L48 AND L70

=> d que 177

L48	612	SEA FILE=WPIDS ABB=ON	PLU=ON	STARCH (3A) OXIDI?
L72	573909	SEA FILE=WPIDS ABB=ON	PLU=ON	FOOD OR FEED
L74	52	SEA FILE=WPIDS ABB=ON	PLU=ON	L48 AND L72
L77	8	SEA FILE=WPIDS ABB=ON	PLU=ON	L74 AND ADDITIVE

=> d que 179

L48	612	SEA FILE=WPIDS ABB=ON	PLU=ON	STARCH (3A) OXIDI?
L78	61	SEA FILE=WPIDS ABB=ON	PLU=ON	BLANKET (3A) ADHESIVE
L79	2	SEA FILE=WPIDS ABB=ON	PLU=ON	L78 AND L48

=> d que 186

L48	612	SEA FILE=WPIDS ABB=ON	PLU=ON	STARCH (3A) OXIDI?
L81	51	SEA FILE=WPIDS ABB=ON	PLU=ON	ALKYL SUCCINIC ANHYDRIDE
L82	316	SEA FILE=WPIDS ABB=ON	PLU=ON	ALKYL KETENE (3A) DIMER
L83	309	SEA FILE=WPIDS ABB=ON	PLU=ON	ALKYL ISOCYANATE
L84	670	SEA FILE=WPIDS ABB=ON	PLU=ON	(L81 OR L82 OR L83)
L86	10	SEA FILE=WPIDS ABB=ON	PLU=ON	L48 AND L84

=> s 156 or 159 or 161 or 164 or 166 or 169 or 171 or 177 or 179 or 186
 L88 35 L56 OR L59 OR L61 OR L64 OR L66 OR L69 OR L71 OR L77 OR L79 OR
 L86

=> dup rem 187 188

FILE 'CAPLUS' ENTERED AT 17:42:13 ON 17 JUN 2002
 USE IS SUBJECT TO THE TERMS OF YOUR STN CUSTOMER AGREEMENT.
 PLEASE SEE "HELP USAGETERMS" FOR DETAILS.
 COPYRIGHT (C) 2002 AMERICAN CHEMICAL SOCIETY (ACS)

FILE 'WPIDS' ENTERED AT 17:42:13 ON 17 JUN 2002
 COPYRIGHT (C) 2002 THOMSON DERWENT
 PROCESSING COMPLETED FOR L87
 PROCESSING COMPLETED FOR L88
 L89 78 DUP REM L87 L88 (4 DUPLICATES REMOVED)

=> d ibib ab 1-78

L89 ANSWER 1 OF 78 WPIDS (C) 2002 THOMSON DERWENT
 ACCESSION NUMBER: 2002-216909 [27] WPIDS
 DOC. NO. CPI: C2002-066286
 TITLE: Detergent composition for removing starch-containing
 stains on fabrics, comprises cyclodextrin
 glucanotransferase enzyme and detergent ingredient which
 is non-ionic surfactant, protease and bleaching agent.
 DERWENT CLASS: A97 D16 D25 E19
 INVENTOR(S): PINTENS, A; SMETS, J
 PATENT ASSIGNEE(S): (PROC) PROCTER & GAMBLE CO
 COUNTRY COUNT: 91
 PATENT INFORMATION:

PATENT NO	KIND	DATE	WEEK	LA	PG
WO 2002002725	A1	20020110	(200227)*	EN	97
RW:	AT BE CH CY DE DK EA ES FI FR GB GH GM GR IE IT KE LS LU MC MW MZ				
NL	OA PT SD SE SL SZ TZ UG ZW				
W:	AE AL AM AT AU AZ BA BB BG BR BY CA CH CN CR CU CZ DE DK DM EE ES				
FI	GB GD GE GH GM HR HU ID IL IN IS JP KE KG KP KR KZ LC LK LR LS				
LT	LU LV MA MD MG MK MN MW MX NO NZ PL PT RO RU SD SE SG SI SK SL				
TJ	TM TR TT TZ UA UG US UZ VN YU ZA ZW				
US 2002032142	A1	20020314	(200227)		
AU 2000060630	A	20020114	(200237)		

APPLICATION DETAILS:

PATENT NO	KIND	APPLICATION	DATE
WO 2002002725	A1	WO 2000-US18119	20000630
US 2002032142	A1	US 2001-888714	20010625
AU 2000060630	A	AU 2000-60630	20000630
		WO 2000-US18119	20000630

FILING DETAILS:

PATENT NO	KIND	PATENT NO
AU 2000060630	A Based on	WO 200202725

PRIORITY APPLN. INFO: WO 2000-US18119 20000630

AB WO 200202725 A UPAB: 20020429

NOVELTY - A detergent composition comprises a cyclodextrin
 glucanotransferase enzyme and a detergent ingredient. The detergent
 ingredient is a non-ionic surfactant, a protease and a bleaching agent.

DETAILED DESCRIPTION - An INDEPENDENT CLAIM is also included for

USE - For use as laundry, dish-washing, hand and machine
 dish-washing, fabric care, and hard surface cleaner compositions, and also
 as detergent additive products to supplement or boost
 performance of conventional detergent compositions, in liquid, paste,
 gels, bars, tablets, sprays, foam, powder and granular form, for use in

soaking and pre-treatment of stained fabrics, rinse added fabric softener compositions, and compositions for use in general household hand surface cleaning operations, for hydrolyzing retrograded and raw starch, for removing food stains such as rice, spaghetti, potatoes, corn and cereals, and also starch-containing stains and soils on fabrics, dish-ware, and other hard surfaces, such as utensils in kitchen, laundry basket and dish-washing machine, and for inhibiting dye transfer from one fabric to another of solubilized and suspended dyes during fabric laundering. The cyclodextrin glucanotransferase enzyme and the detergent ingredient are used in the detergent composition for the hydrolysis of retrograded and raw starch (claimed).

ADVANTAGE - The detergent composition produces excellent whiteness maintenance and dingy cleaning, and provides synergistic removal of starch-containing stains-soils and control of undesired odor, when compared conventionally. The cyclodextrins in the composition, efficiently improves solubility and stability, reduces chemical reactivity and volatility, and is efficiently utilized in food, cosmetic, chemical and pharmaceutical industries. The cyclodextrin glucanotransferase has favorable starch-degrading activity and transglycosylation activity, and is inexpensive and eco-friendly. The cyclodextrin glucanotransferase shows increased product selectivity and reduced product inhibition, when compared to precursor enzyme. The starch-containing stains/soils even contained in complexed stains is more easily hydrolyzed by protease enzyme, and synergistic break down of the starch soil is performed by the cyclodextrin glucanotransferase and the non-ionic surfactant. The bleaching agent oxidizes and solubilizes the starch material, and hence the starch is more easily removed by the cyclodextrin glucanotransferase and it results in less redeposition on the surface to be cleaned. The detergent composition provides excellent dye transfer inhibiting properties and does not adversely affect the cleaning performance, due to the presence of N-vinylimidazole N-vinylpyrrolidone copolymers.

Dwg. 0/0

L89 ANSWER 2 OF 78 CAPLUS COPYRIGHT 2002 ACS DUPLICATE 1
 ACCESSION NUMBER: 2000:742147 CAPLUS
 DOCUMENT NUMBER: 133:311086
 TITLE: Oxidized starch, its manufacture
 and use, especially as superabsorbent
 INVENTOR(S): Fisher, Richard; Herrmann, Wolfgang A.; Zoller, P.
 Jochen
 PATENT ASSIGNEE(S): Celanese Chemicals Europe G.m.b.H., Germany
 SOURCE: PCT Int. Appl., 28 pp.
 CODEN: PIIXD2
 DOCUMENT TYPE: Patent
 LANGUAGE: German
 FAMILY ACC. NUM. COUNT: 1
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2000061639	A1	20001019	WO 2000-EP2456	20000321
W: US				
RW: AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE				
DE 19914067	C1	20010315	DE 1999-19914067	19990327
PRIORITY APPLN. INFO.:			DE 1999-19914067 A	19990327
OTHER SOURCE(S):	MARPAT 133:311086			
AB	The title starch, useful as superabsorbent, seed and/or fertilizer carrier or soil improving agent, as material for galenicals or in			

adhesives and binders, is manufd. by oxidizing native starch in an acid solvent by (a) introducing 0.1-1.9 equiv (based on anhydroglucose units present in the native starch) of the oxidant in acid the starch soln., (b) carrying out the oxidn. in the presence of a catalyst contg. (i) MeReO₃ or an alkylrhenium oxide or ReO₃ or Re₂O₇, (ii) a di-tertiary alkyl nitroxyl, and (iii) hydrogen halide dissolved in a carboxylic acid, (c) carrying out oxidn. in H₂O, a carboxylic acid, an org. solvent or a mixt. contg. .gtoreq.2 of these ingredients, at 0-50.degree.. Thus, a superabsorbent was prep'd. by oxidn. of starch suspended in AcOH with 30% aq. H₂O₂, in the presence of MeReO₃ and HBr.

REFERENCE COUNT: 5 THERE ARE 5 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L89 ANSWER 3 OF 78 CAPLUS COPYRIGHT 2002 ACS DUPLICATE 2
 ACCESSION NUMBER: 2000:191115 CAPLUS
 DOCUMENT NUMBER: 132:224042
 TITLE: Hydrogen peroxide oxidation of starch
 INVENTOR(S): Kesselmans, Ronald Peter Wilhelmus; Bleeker, Ido Pieter
 PATENT ASSIGNEE(S): Cooperatieve Verkoop- En Productievereniging Van Aardappelmeel En Derivaten, Neth.
 SOURCE: PCT Int. Appl., 23 pp.
 CODEN: PIXXD2
 DOCUMENT TYPE: Patent
 LANGUAGE: English
 FAMILY ACC. NUM. COUNT: 1
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2000015670	A1	20000323	WO 1999-NL568	19990913
W: AE, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CR, CU, CZ, DE, DK, DM, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, UA, UG, US, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM				
RW: GH, GM, KE, LS, MW, SD, SL, SZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG				
AU 9956562	A1	20000403	AU 1999-56562	19990913
BR 9913581	A	20010522	BR 1999-13581	19990913
EP 1112287	A1	20010704	EP 1999-943485	19990913
EP 1112287	B1	20020605		
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO				

PRIORITY APPLN. INFO.: EP 1998-203043 A 19980911
 WO 1999-NL568 W 19990913
 AB A root or tuber starch, comprising .gtoreq.95% (based on dry starch) of amylopectin, or a deriv. of such starch is treated with H₂O₂ in the presence of Cu²⁺ ion catalyst. Under the process condition cereal and fruit starches are not degraded to a sufficient extent to obtain a product having desired characteristics. The use of oxidized starch as binder in paper coatings, in surface sizes and adhesives, as food additive and emulsifier for paper sizing agents is claimed.

REFERENCE COUNT: 6 THERE ARE 6 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L89 ANSWER 4 OF 78 WPIDS (C) 2002 THOMSON DERWENT
 ACCESSION NUMBER: 2000-205455 [18] WPIDS
 DOC. NO. CPI: C2000-063296
 TITLE: Oxidation of starch for use e.g., as binder in paper
 coatings, involves subjecting an **oxidized**
 starch to an alkaline treatment at pH higher than
 10.
 DERWENT CLASS: A11 D13 F06 F09 G02 G03
 INVENTOR(S): BROUWER, P H; KESSELMANS, R P W; TER VEER, B C A;
 WIELEMA, T A
 PATENT ASSIGNEE(S): (CVPA) COOP VERKOOP PROD VAN AARDAPP AVEBE
 COUNTRY COUNT: 87
 PATENT INFORMATION:

PATENT NO	KIND	DATE	WEEK	LA	PG
WO 2000006607	A1	20000210	(200018)*	EN	31
RW:	AT BE CH CY DE DK EA ES FI FR GB GH GM GR IE IT KE LS LU MC MW NL OA PT SD SE SL SZ UG ZW				
W:	AE AL AM AT AU AZ BA BB BG BR BY CA CH CN CU CZ DE DK EE ES FI GB GD GE GH GM HR HU ID IL IN IS JP KE KG KP KR KZ LC LK LR LS LT LU LV MD MG MK MN MW MX NO NZ PL PT RO RU SD SE SG SI SK SL TJ TM TR TT UA UG US UZ VN YU ZA ZW				
AU 9951995	A	20000221	(200029)		
BR 9912634	A	20010424	(200128)		
EP 1109836	A1	20010627	(200137)	EN	
R:	AL AT BE CH CY DE DK ES FI FR GB GR IE IT LI LT LU LV MC MK NL PT RO SE SI				
CN 1317016	A	20011010	(200207)		

APPLICATION DETAILS:

PATENT NO	KIND	APPLICATION	DATE
WO 2000006607	A1	WO 1999-NL484	19990728
AU 9951995	A	AU 1999-51995	19990728
BR 9912634	A	BR 1999-12634	19990728
		WO 1999-NL484	19990728
EP 1109836	A1	EP 1999-937105	19990728
		WO 1999-NL484	19990728
CN 1317016	A	CN 1999-810481	19990728

FILING DETAILS:

PATENT NO	KIND	PATENT NO
AU 9951995	A Based on	WO 200006607
BR 9912634	A Based on	WO 200006607
EP 1109836	A1 Based on	WO 200006607

PRIORITY APPLN. INFO: EP 1998-202593 19980731

AB WO 200006607 A UPAB: 20000412

NOVELTY - Starch is **oxidized** by treating a root or tuber starch comprising at least 95 wt.% amylopectin, based on dry substance of the starch, with an alkali metal hypochlorite and subjecting the resulting product to an alkaline treatment. The alkaline treatment comprises keeping the product at 20 - 50 deg. C for 15 minutes and at pH higher than 10.

DETAILED DESCRIPTION - INDEPENDENT CLAIMS are also included for (A) an **oxidized starch** obtainable from the process; and

(B) the use of the oxidized starch.

USE - The oxidized starch is used as a binder in paper coatings or surface sizings, as an adhesive, a protective colloid for stabilizing emulsions, in warp yarn sizing, as a coating of glass fibers, as a blanket adhesive, and in abrasive paper or in food products (all claimed).

ADVANTAGE - The oxidation process can be carried out in a shorter period of time and requires only small amounts of oxidizing agent. The oxidized starch obtained has an excellent stability of the viscosity and contains much smaller amounts of chlorine compared to the conventional oxidation process.

Dwg. 0/0

L89 ANSWER 5 OF 78 WPIDS (C) 2002 THOMSON DERWENT
 ACCESSION NUMBER: 2000-378327 [33] WPIDS
 CROSS REFERENCE: 2000-041907 [04]
 DOC. NO. CPI: C2000-114709
 TITLE: Polysaccharide for reducing viscosity resulting from psyllium has specified molecular weight and viscosity.
 DERWENT CLASS: A11 A97 D13
 INVENTOR(S): AKIYAMA, D; DATE, K; KAWAMURA, Y; NAKAZEKO, T; UEDA, K
 PATENT ASSIGNEE(S): (NISP) NISSIN SHOKUHIN KAISHA LTD; (NISP) NISSSHIN FOODS KK
 COUNTRY COUNT: 29
 PATENT INFORMATION:

PATENT NO	KIND	DATE	WEEK	LA	PG
EP 1008306	A2	20000614	(200033)*	EN	30
R: AL AT BE CH CY DE DK ES FI FR GB GR IE IT LI LT LU LV MC MK NL PT RO SE SI					
JP 3068078	B1	20000724	(200040)		6
CA 2292056	A1	20000610	(200043)	EN	
JP 2000224975	A	20000815	(200044)		7
CN 1256901	A	20000621	(200049)		
JP 2001103934	A	20010417	(200128)		9
US 2001051203	A1	20011213	(200204)		

APPLICATION DETAILS:

PATENT NO	KIND	APPLICATION	DATE
EP 1008306	A2	EP 1999-309906	19991209
JP 3068078	B1	JP 1999-26293	19990203
CA 2292056	A1	CA 1999-2292056	19991209
JP 2000224975	A	JP 1999-26293	19990203
CN 1256901	A	CN 1999-126137	19991210
JP 2001103934	A	JP 1999-284427	19991005
US 2001051203	A1 Div ex	US 1999-457168	19991208
		US 2001-861335	20010518

PRIORITY APPLN. INFO: JP 1999-284427 19991005; JP 1998-351363
 19981210; JP 1999-26293 19990203

AB EP 1008306 A UPAB: 20020117

NOVELTY - A polysaccharide for reducing the viscosity resulting from psyllium is characterized by the polysaccharide having a molecular weight of 20,000 or greater and a viscosity of an aqueous solution at 2 wt% of 9.0 cp or less (determined using a type B viscometer with Rotor No.1, at

60 rpm and 25 deg. C.

DETAILED DESCRIPTION - INDEPENDENT CLAIMS are also included for: (1) a composition for addition into foods comprising psyllium and the polysaccharide; (2) a method for manufacturing a liquid food comprising (a) preparing an aqueous solution comprising the above, (b) packing the solution into a container followed by heat sealing and (c) sterilizing the solution by heating at any time prior to, during or following the packing step (b); (3) a powdered food for preparing a liquid food comprising psyllium and the polysaccharide.

USE - Useful as an ingredient of several kinds of foods containing psyllium which is known to result in high viscosity when incorporated into a hydrated condition.

ADVANTAGE - The polysaccharide is capable of suppressing the onset of the elevated viscosity and gel-forming characteristics resulting from psyllium in response to the hydration without deteriorating the physiological effects associated naturally with the psyllium, such as intestinal function-controlling effect etc.

Dwg.0/6

L89 ANSWER 6 OF 78 WPIDS (C) 2002 THOMSON DERWENT
 ACCESSION NUMBER: 2000-483975 [43] WPIDS
 DOC. NO. CPI: C2000-145845
 TITLE: Particulate dry baking yeast coated or encapsulated with starch so as to protect it from the effects of air and thus give retention of activity over prolonged periods.
 DERWENT CLASS: A97 D11 D16
 INVENTOR(S): SEIBOLD, W
 PATENT ASSIGNEE(S): (SEIB-I) SEIBOLD W
 COUNTRY COUNT: 1
 PATENT INFORMATION:

PATENT NO	KIND	DATE	WEEK	LA	PG
DE 19900446	A1	20000713	(200043)*		7

APPLICATION DETAILS:

PATENT NO	KIND	APPLICATION	DATE
DE 19900446	A1	DE 1999-19900446	19990108

PRIORITY APPLN. INFO: DE 1999-19900446 19990108

AB DE 19900446 A UPAB: 20000907

NOVELTY - Dry baking yeast in the form of fermentable particles is coated or encapsulated to protect it from the effects of air.

USE - In ready-to-use flour or baking mixes especially for bread, the freshly obtained encapsulated yeast being mixed with the flour and other additives and then the product being air- and moisture-tight packaged.

ADVANTAGE - The encapsulated yeast can be used without the need for rehydration of the dough mixture and without the need for use of special packaging. It retains its activity for several months in air-tight packaging.

Dwg.0/0

L89 ANSWER 7 OF 78 WPIDS (C) 2002 THOMSON DERWENT
 ACCESSION NUMBER: 2000-063839 [06] WPIDS
 DOC. NO. CPI: C2000-017920
 TITLE: Production of starch esters with low residual acid

content, useful for the preparation of compounds with defibrillated cellulose fillers.

DERWENT CLASS: A11
 INVENTOR(S): KAKUSCHKE, R; RAPTHEL, I; RUNKEL, D; STOYE, H
 PATENT ASSIGNEE(S): (BUNA) BUNA SOW LEUNA OLEFINVERBUND GMBH
 COUNTRY COUNT: 82
 PATENT INFORMATION:

PATENT NO	KIND	DATE	WEEK	LA	PG
DE 19849187	C1	20000105	(200006)*		5
WO 2000024783	A1	20000504	(200030)	GE	
RW: AT BE CH CY DE DK ES FI FR GB GR IE IT LU MC NL PT SE					
W: AL AM AT AU AZ BA BB BG BR BY CA CH CN CU CZ DE DK EE ES FI GB GD					
GE GH GM HR HU ID IL IN IS JP KE KG KP KR KZ LC LK LR LS LT LU LV					
MD MG MK MN MW MX NO NZ PL PT RO RU SD SE SG SI SK SL TJ TM TR TT					
UA UG US UZ VN YU ZW					
AU 2000018554	A	20000515	(200039)		
EP 1127077	A1	20010829	(200150)	GE	
R: AL AT BE CH CY DE DK ES FI FR GB GR IE IT LI LT LU LV MC MK NL PT					
RO SE SI					
DE 19982166	T	20010927	(200156)		

APPLICATION DETAILS:

PATENT NO	KIND	APPLICATION	DATE
DE 19849187	C1	DE 1998-19849187	19981026
WO 2000024783	A1	WO 1999-DE3218	19991006
AU 2000018554	A	AU 2000-18554	19991006
EP 1127077	A1	EP 1999-962029	19991006
		WO 1999-DE3218	19991006
DE 19982166	T	DE 1999-19982166	19991006
		WO 1999-DE3218	19991006

FILING DETAILS:

PATENT NO	KIND	PATENT NO
AU 2000018554	A Based on	WO 200024783
EP 1127077	A1 Based on	WO 200024783
DE 19982166	T Based on	WO 200024783

PRIORITY APPLN. INFO: DE 1998-19849187 19981026

AB DE 19849187 C UPAB: 20000203

NOVELTY - Starch esters are produced by heating under pressure to give a high-viscosity reaction mixture containing 15-75% starch carboxylate ester with a degree of substitution (DS) of 0.5-2.95 in dissolved or partly dissolved and swollen, suspended form at 140-220 deg. C and 1.5-300 bar and then releasing the mixture into a space at 30-120 deg. C and 0.05-100 mbar.

USE - The starch esters are especially useful for the production of compounds with defibrillated, cellulose-containing fillers.

ADVANTAGE - A low-cost process for the production of starch esters with a low residual acid content, without the disadvantages of prior art processes (difficult work-up, reduced yields due to side reactions and decomposition, catalyst residues, long drying times and corrosion with vacuum drying methods etc.).

Dwg. 0/0

L89 ANSWER 8 OF 78 CAPLUS COPYRIGHT 2002 ACS DUPLICATE 3
 ACCESSION NUMBER: 1999:723247 CAPLUS
 DOCUMENT NUMBER: 131:338510
 TITLE: Manufacture of paper liner for plasterboard
 INVENTOR(S): Dawson, Ronley John
 PATENT ASSIGNEE(S): Visy R & D Pty. Ltd., Australia
 SOURCE: PCT Int. Appl., 21 pp.
 CODEN: PIXXD2
 DOCUMENT TYPE: Patent
 LANGUAGE: English
 FAMILY ACC. NUM. COUNT: 1
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 9957371	A1	19991111	WO 1999-AU324	19990504
W: AE, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ, DE, DK, EE, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, UA, UG, US, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM				
RW: GH, GM, KE, LS, MW, SD, SL, SZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG				
TW 459084	B	20011011	TW 1999-88107166	19990503
AU 9935126	A1	19991123	AU 1999-35126	19990504
AU 740180	B2	20011101		
EP 1090184	A1	20010411	EP 1999-916717	19990504
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, FI				
JP 2002513873	T2	20020514	JP 2000-547313	19990504
PRIORITY APPLN. INFO.:			AU 1998-3323	A 19980504
			AU 1998-6281	A 19981001
			WO 1999-AU324	W 19990504

AB A title liner has a base paper with a surface size applied to 1 surface. The surface size includes oxidized starch, a sizing agent selected from alkenyl succinic anhydride, succinic anhydride, wood rosin, alkyl ketene dimer and their mixts., and an acrylic-contg. polymer. A coating including .gtoreq.1 inorg. filler and .gtoreq.1 binder is applied to the side of the paper having the external surface size. The surface size and coating are sufficiently porous to enable drying of the gypsum slurry used in manuf. of the plasterboard. The paper also provides a surface that can be printed with a decorative pattern and does not require painting or wall papering to provide and esthetically pleasing appearance.

REFERENCE COUNT: 3 THERE ARE 3 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L89 ANSWER 9 OF 78 CAPLUS COPYRIGHT 2002 ACS
 ACCESSION NUMBER: 1999:194186 CAPLUS
 DOCUMENT NUMBER: 130:239098
 TITLE: Manufacture of stable, chlorine-free modified starch
 INVENTOR(S): Ketola, Hannu; Hagberg, Peggy
 PATENT ASSIGNEE(S): Raisio Chemicals Oy, Finland
 SOURCE: PCT Int. Appl., 23 pp.
 CODEN: PIXXD2
 DOCUMENT TYPE: Patent
 LANGUAGE: English
 FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 9912977	A1	19990318	WO 1998-FI684	19980902
W: AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ, DE, DK, EE, ES, FI, GB, GE, GH, GM, HR, HU, ID, IL, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, UA, UG, US, UZ, VN, YU, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM				
RW: GH, GM, KE, LS, MW, SD, SZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG				
FI 9703651	A	19990311	FI 1997-3651	19970910
CA 2302567	AA	19990318	CA 1998-2302567	19980902
AU 9890737	A1	19990329	AU 1998-90737	19980902
EP 1015497	A1	20000705	EP 1998-942702	19980902
R: AT, BE, CH, DE, DK, ES, FR, GB, IT, LI, NL, SE, PT, SI, FI				
PRIORITY APPLN. INFO.:			FI 1997-3651	A 19970910
			WO 1998-FI684	W 19980902

AB A title starch, useful as **binder** in paper coating pastes and for **surface sizing** of paper, is manufd. by degrading the starting material, e.g., potato starch by oxidn. with H₂O₂ in the presence of Cu catalyst, and stabilizing the **oxidized starch** by acetylation combined with crosslinking. A typical title starch was manufd. by **oxidizing** potato starch with H₂O₂ in aq. suspension at 40.degree. and pH 10 in the presence of 0.015% CuSO₄, and acetylating with simultaneous crosslinking the product by reacting for 2 h at pH 8-9 with Ac₂O contg. 0.15% adipic acid.

REFERENCE COUNT: 3 THERE ARE 3 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L89 ANSWER 10 OF 78 CAPLUS COPYRIGHT 2002 ACS
 ACCESSION NUMBER: 1999:70233 CAPLUS
 DOCUMENT NUMBER: 130:140259
 TITLE: Water-thinned emulsion adhesives having good water-resistant adhesion, storage stability, and high-speed coatability
 INVENTOR(S): Nakamae, Masato; Fujiwara, Naoki
 PATENT ASSIGNEE(S): Kuraray Co., Ltd., Japan
 SOURCE: Jpn. Kokai Tokkyo Koho, 8 pp.
 CODEN: JKXXAF
 DOCUMENT TYPE: Patent
 LANGUAGE: Japanese
 FAMILY ACC. NUM. COUNT: 1
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 11021529	A2	19990126	JP 1997-173865	19970630
AB Title adhesives comprise dispersoids of copolymers obtained from .gtoreq.1 monomers selected from ethylenic unsatd. monomers and diene-type monomers and dispersants comprising modified poly(vinyl alcs.) having C.gtoreq.4 .alpha.-olefin units 1-20 mol% (A), starches (B), and saccharides (C), wherein 1-10,000 parts of B and 0-1000 parts of C per 100 parts of A. Thus, modified PVA (polymn. degree 1750, saponid. degree 98.9 mol%, ethylene content 5 mol%) 30, MS 3800 (oxidized starch) 20, and Trehalose (trehalose) 0.5 g were dissolved in 400 g water, 40 g vinyl acetate and H ₂ O ₂ /tartaric acid				

catalyst were added to give a 50.4% poly(vinyl acetate) emulsion having viscosity 6500 mPas-s and good water-resistant adhesion, storage stability, and high-speed coatability.

L89 ANSWER 11 OF 78 WPIDS (C) 2002 THOMSON DERWENT
 ACCESSION NUMBER: 1999-561816 [47] WPIDS
 DOC. NO. NON-CPI: N1999-415145
 DOC. NO. CPI: C1999-163749
 TITLE: Absorbent structure based on raw materials having high degree of renewability.
 DERWENT CLASS: A11 A14 A96 D17 D22 F07 P32 P34
 INVENTOR(S): LAGERSTEDT EIDRUP, M; LAGERSTEDT, M; LAGERSTEDT, E M
 PATENT ASSIGNEE(S): (SCAD) SCA HYGIENE PROD AB
 COUNTRY COUNT: 85
 PATENT INFORMATION:

PATENT NO	KIND	DATE	WEEK	LA	PG
WO 9947093	A1	19990923 (199947)*	EN	29	
RW:	AT BE CH CY DE DK EA ES FI FR GB GH GM GR IE IT KE LS LU MC MW NL OA PT SD SE SL SZ UG ZW				
W:	AL AM AT AU AZ BA BB BG BR BY CA CH CN CU CZ DE DK EE ES FI GB GD GE GH GM HR HU ID IL IN IS JP KE KG KP KR KZ LC LK LR LS LT LU LV MD MG MK MN MW MX NO NZ PL PT RO RU SD SE SG SI SK SL TJ TM TR TT UA UG US UZ VN YU ZW				
SE 9800846	A	19990917 (199952)			
AU 9929659	A	19991011 (200008)			
EP 1069879	A1	20010124 (200107)	EN		
R:	AT BE CH CY DE DK ES FI FR GB GR IE IT LI LU MC NL PT SE				
SK 2000001186	A3	20010212 (200112)			
MX 2000007563	A1	20010201 (200168)			
JP 2002506714	W	20020305 (200220)		38	

APPLICATION DETAILS:

PATENT NO	KIND	APPLICATION	DATE
WO 9947093	A1	WO 1999-SE284	19990301
SE 9800846	A	SE 1998-846	19980316
AU 9929659	A	AU 1999-29659	19990301
EP 1069879	A1	EP 1999-910898	19990301
		WO 1999-SE284	19990301
SK 2000001186	A3	WO 1999-SE284	19990301
		SK 2000-1186	19990301
MX 2000007563	A1	MX 2000-7563	20000802
JP 2002506714	W	WO 1999-SE284	19990301
		JP 2000-536335	19990301

FILING DETAILS:

PATENT NO	KIND	PATENT NO
AU 9929659	A Based on	WO 9947093
EP 1069879	A1 Based on	WO 9947093
JP 2002506714	W Based on	WO 9947093

PRIORITY APPLN. INFO: SE 1998-846 19980316

AB WO 9947093 A UPAB: 19991116

NOVELTY - Absorbent structure based on raw materials having high degree of renewability includes a superabsorbent produced from hydrophilic monomers

by free radical copolymerization in presence of optionally chemically modified starch.

DETAILED DESCRIPTION - Absorbent structure contains a superabsorbent which has been produced from hydrophilic monomers by free radical copolymerization in the presence of optionally chemically modified starch. Use is made, during the production, of a free radical initiator which forms three or more radical sites per molecule and the superabsorbent structure includes hydrophilic and/or hydrophobic fibers which, together with a superabsorbent, impart hydrophilic character to the absorbent structure, and in the dry state, the superabsorbent constitutes 10-75% of the dry weight of the structure.

An INDEPENDENT CLAIM is also included for an absorbent product such as nappy, incontinence shield or a sanitary towel including an absorptive body comprising the absorptive structure as above enclosed by an enveloping material which is at least partially fluid-permeable.

USE - The absorbent structure is useful in absorbent products such as nappy, incontinence shield, and sanitary towel etc.

ADVANTAGE - The absorbent structure and the product are based on raw materials having a high degree of renewability and are derived from non-fossil raw materials. The absorbent structure and products do not need any special constructions.

Dwg. 0/4

L89 ANSWER 12 OF 78 WPIDS (C) 2002 THOMSON DERWENT
 ACCESSION NUMBER: 1999-430651 [36] WPIDS
 DOC. NO. CPI: C1999-127021
 TITLE: Impulse-dried paper with three-dimensional pattern, for use as toilet paper, kitchen roll, table napkins etc..
 DERWENT CLASS: A11 A14 A18 A28 A97 F09
 INVENTOR(S): HOLLMARK, H; LAMB, H; REINER, L; WALLENIUS, H
 PATENT ASSIGNEE(S): (SCAD) SCA HYGIENE PAPER AB; (SCAD) SCA HYGIENE PROD AB
 COUNTRY COUNT: 82
 PATENT INFORMATION:

PATENT NO	KIND	DATE	WEEK	LA	PG
WO 9936620	A1	19990722	(199936)*	EN	16
RW:	AT BE CH CY DE DK EA ES FI FR GB GH GM GR IE IT KE LS LU MC MW NL OA PT SD SE SZ UG ZW				
W:	AL AM AT AU AZ BA BB BG BR BY CA CH CN CU CZ DE DK EE ES FI GB GE GH GM HR HU ID IL IS JP KE KG KP KR KZ LC LK LR LS LT LU LV MD MG MK MN MW MX NO NZ PL PT RO RU SD SE SG SI SK SL TJ TM TR TT UA UG US UZ VN YU ZW				
SE 9704910	A	19990701	(199938)		
AU 9920830	A	19990802	(199954)		
DE 29824269	U1	20000914	(200053)		

APPLICATION DETAILS:

PATENT NO	KIND	APPLICATION	DATE
WO 9936620	A1	WO 1998-SE2458	19981229
SE 9704910	A	SE 1997-4910	19971230
AU 9920830	A	AU 1999-20830	19981229
DE 29824269	U1	DE 1998-29824269	19981229
		Application no. WO 1998-SE2458	19981229

FILING DETAILS:

PATENT NO	KIND	PATENT NO
-----------	------	-----------

AU 9920830 A Based on WO 9936620

PRIORITY APPLN. INFO: SE 1997-4910 19971230

AB WO 9936620 A UPAB: 19990908

NOVELTY - The use of additives which undergo chemical reaction in connection with impulse drying, thus contributing to stabilizing of pattern structure.

DETAILED DESCRIPTION - Impulse-dried paper, having three-dimensional pattern of alternating raised and recessed portions, conveyed to paper during impulse-drying process, contains at least 0.05 wt.%, preferably at least 0.25 wt.% (calculated per dry fiber wt.) of one or more additives undergoing chemical reaction (preferably acetylation, silylation and/or crosslinking with bi- or multifunctional groups, such as diisocyanates and triazine derivatives) in connection with impulse drying, in result of which they contribute to stabilizing of pattern structure produced on paper during impulse drying stage. The additive is preferably reactive polymer, such as wet strength agent, fixing agent, polysaccharide, polyvinyl alcohol, or polyacid, such as polyacrylic acid and its copolymers; or hydrophobizing agent, e.g. resin, fatty acid, alkyl ketene dimer or alkyl succinic acid preparation; or inorganic pigment or complex former which can react with specific groups in lignin and cellulose and form three-dimensional networks. The additive may either be bonded to the fiber surface or be added as separate addition either to the fiber furnish or to the moist paper web before the impulse drying.

USE - In production of soft absorbent paper with three-dimensional pattern, for use e.g. as toilet paper, kitchen roll, table napkin, paper handkerchief etc.

ADVANTAGE - The paper maintains its pattern structure also in wet conditions, which greatly improves its absorbing properties.

DESCRIPTION OF DRAWING(S) - The drawing shows schematic view of impulse drying device.

wet paper web 10

compressible press felt 11

press nip 12

heated roll 13

pressing roll 14

wind-up roll 16

Dwg.1/7

L89 ANSWER 13 OF 78 WPIDS (C) 2002 THOMSON DERWENT

ACCESSION NUMBER: 2000-348753 [30] WPIDS

DOC. NO. CPI: C2000-105952

TITLE: Water-soluble adhesive for food industry.

DERWENT CLASS: D13 G03

INVENTOR(S): MATUKHIN, E L; VALISHINA, Z T; YARULLIN, R N

PATENT ASSIGNEE(S): (MATU-I) MATUKHIN E L; (VALI-I) VALISHINA Z T; (YARU-I) YARULLIN R N

COUNTRY COUNT: 1

PATENT INFORMATION:

PATENT NO	KIND	DATE	WEEK	LA	PG
RU 2133763	C1	19990727	(200030)*		

APPLICATION DETAILS:

PATENT NO	KIND	APPLICATION	DATE
-----------	------	-------------	------

RU 2133763 C1

RU 1997-100341 19970113

PRIORITY APPLN. INFO: RU 1997-100341 19970113

AB RU 2133763 C UPAB: 20000624

NOVELTY - In order to prepare adhesive, use is made of casein solution containing active **additives** having weight concentration within 28-31.4% with alkaline solution of **oxidized starch**.

Ratio of weight parts of said components is 5:1. Adhesive composition has higher frost resistance and withstands at least four cycles of freezing and thawing.

USE - **Food industry**, more particularly gluing of carbon boxes with varnish-painted surfaces for packing quickly frozen products.

ADVANTAGE - Improved properties of the adhesive.

Dwg. 0/0

L89 ANSWER 14 OF 78 WPIDS (C) 2002 THOMSON DERWENT

ACCESSION NUMBER: 1999-573816 [49] WPIDS

DOC. NO. CPI: C1999-167543

TITLE: An environmentally-friendly aqueous architectural coating composition containing modified starch.

DERWENT CLASS: A11 A82 G02

INVENTOR(S): HORLEY, S; WHEELER, S A; HORLEY, S M

PATENT ASSIGNEE(S): (ICIL) IMPERIAL CHEM IND PLC

COUNTRY COUNT: 85

PATENT INFORMATION:

PATENT NO	KIND	DATE	WEEK	LA	PG
<hr/>					
EP 949307	A1	19991013 (199949)*	EN	12	
R: AL AT BE CH CY DE DK ES FI FR GB GR IE IT LI LT LU LV MC MK NL PT RO SE SI					
WO 9952985	A1	19991021 (199952)	EN		
RW: EA GH GM KE LS MW OA SD SL SZ UG ZW W: AL AM AT AU AZ BA BB BG BR BY CA CH CN CU CZ DE DK EE ES FI GB GE GH GM HR HU ID IL IN IS JP KE KG KP KR KZ LC LK LR LS LT LU LV MD MG MK MN MW MX NO NZ PL PT RO RU SD SE SG SI SK SL TJ TM TR TT UA UG US UZ VN YU ZA ZW					
AU 9931481	A	19991101 (200013)			
BR 9909475	A	20001219 (200103)			
EP 949307	B1	20011010 (200167)	EN		
R: AT BE CH DE DK ES FI FR GB GR IE IT LI NL PT SE					
DE 69900338	E	20011115 (200176)			
US 6384132	B1	20020507 (200235)			

APPLICATION DETAILS:

PATENT NO	KIND	APPLICATION	DATE
<hr/>			
EP 949307	A1	EP 1999-106611	19990331
WO 9952985	A1	WO 1999-EP2185	19990331
AU 9931481	A	AU 1999-31481	19990331
BR 9909475	A	BR 1999-9475	19990331
		WO 1999-EP2185	19990331
EP 949307	B1	EP 1999-106611	19990331
DE 69900338	E	DE 1999-600338	19990331
		EP 1999-106611	19990331
US 6384132	B1	US 1999-286312	19990405

FILING DETAILS:

PATENT NO	KIND	PATENT NO
AU 9931481	A Based on	WO 9952985
BR 9909475	A Based on	WO 9952985
DE 69900338	E Based on	EP 949307

PRIORITY APPLN. INFO: GB 1998-7426 19980408

AB EP 949307 A UPAB: 19991124

NOVELTY - An environmentally-friendly aqueous architectural coating composition which includes film-forming binder polymer composed of modified starch chemically associated with chains of copolymerized monomers, at least 93 wt.% of which are selected from mono-ethylenically unsaturated monomers.

DETAILED DESCRIPTION - An environmentally-friendly aqueous architectural coating composition which includes film-forming binder polymer composed of modified starch chemically associated with chains of copolymerized monomers, at least 93 wt.% of which are selected from mono-ethylenically unsaturated monomers, where:

- a) the starch has been modified by the introduction of carboxylic acid or groups optionally converted to an inorganic salt,
- b) up to 50 wt.% of the starch-containing binder polymer is provided by the modified starch and
- c) not more than 7 mol.% of the copolymerized mono-ethylenically unsaturated monomers are derived from carboxylic acid monomers.

An INDEPENDENT CLAIM is also included for a process for making the described coating composition by:

- a) modifying a starch by lightly oxidizing it to introduce carboxylic acid groups optionally converted to an inorganic salt,
- b) adding free radical initiator to an aqueous dispersion of the modified starch and feeding the unsaturated monomers into the dispersion,
- c) subjecting the dispersion to a temperature which causes polymerization of the monomers to produce chains of copolymerized monomers chemically associated with the modified starch, in turn creating the starch-containing film-forming binder,
- d) mixing this binder with other components of the composition,
- e) choosing the ratio of modified starch to unsaturated monomers so as to ensure that the weight of starch in the starch-containing binder does not exceed 50 wt.% of the weight of the starch-containing binder and choosing a ratio of monomers such that not more than 7 mol.% of the copolymerized monomers are derived from carboxylic acid monomers.

USE - This is for eg. water-resistant paints, varnishes or woodstains suitable for use at ambient temperature.

ADVANTAGE - Dependency on materials obtained from non-renewable resources such as petrochemicals is reduced. Smaller amounts of expensive co-monomers are needed. The coatings are water-resistant and can have thixotropic properties. They can be applied with a brush or pad.

Dwg. 0/0

L89 ANSWER 15 OF 78 CAPLUS COPYRIGHT 2002 ACS
 ACCESSION NUMBER: 1999:555855 CAPLUS
 DOCUMENT NUMBER: 132:167288
 TITLE: Preparation and application of a quick - drying modified starch adhesive
 AUTHOR(S): Chen, Chun-Xin; Yuan, Yi-Hua; Lai, Xing-Hua; Luo, Chun-Qiu
 CORPORATE SOURCE: Department of Chemistry and Chemical Engineering Foshan University, Foshan, 528000, Peop. Rep. China
 SOURCE: Huaxue Yu Nianhe (1999), (3), 135-137

CODEN: HYZHEN; ISSN: 1001-0017
 PUBLISHER: Huaxue Yu Nianhe Bianji Weiyuanhui
 DOCUMENT TYPE: Journal
 LANGUAGE: Chinese

AB A new adhesive which is more suitable for corrugated cardboard manuf. was developed by using tapioca starch as the reactant. H₂O₂ as oxidant, NaOH as pasting agent, and by adding urea-formaldehyde resin and China clay as additives to improve properties. The new adhesive had good adhesion force and good appearance.

L89 ANSWER 16 OF 78 CAPLUS COPYRIGHT 2002 ACS
 ACCESSION NUMBER: 2001:220457 CAPLUS
 DOCUMENT NUMBER: 134:224217
 TITLE: Process and installation for producing coated writing-printing paper
 INVENTOR(S): Avram, Natalia; Pavaleanu, Tici; Bordea, Ion; Traistaru, Teodor; Mohorea, Penelopa; Munteanu, Carmen
 PATENT ASSIGNEE(S): SC Celhart Donaris SA, Braila, Rom.
 SOURCE: Rom., 8 pp.
 CODEN: RUXXA3
 DOCUMENT TYPE: Patent
 LANGUAGE: Romanian
 FAMILY ACC. NUM. COUNT: 1
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
RO 113577	B3	19980828	RO 1997-1273	19970709

AB The paper is fabricated by mixing bleached sulfate pulp (from resinous and foliacea woods) with 20-25% CaCO₃ filler, 0.5-0.8% cationic starch, and 0.005-0.006% whitener; a neutral or cationic alkyl-ketene dimer is added to enhance the bending strength and a cationic polyacrylamide is added as retention agent. The pulp is processed into paper sheets which are then surface-treated with a soln. contg. 2.5-4% [of total fiber] oxidized starch and 0.5-0.8% opacity control agent. The installation for paper manuf. comprises an integrated mixing and press train, including storage bins, hoppers, dispensing valves, pumps, and process water network.

L89 ANSWER 17 OF 78 CAPLUS COPYRIGHT 2002 ACS
 ACCESSION NUMBER: 1997:629470 CAPLUS
 DOCUMENT NUMBER: 127:249594
 TITLE: Method for improving the surface properties of paper and cardboard by treatment with a mixture containing a binder and inorganic and organic pigment
 INVENTOR(S): Hamunen, Antti; Teirfolk, Jan-Erik; Lindholm, Joergen; Paavola, Virpi
 PATENT ASSIGNEE(S): Raisio Chemicals Oy, Finland
 SOURCE: Finn., 22 pp.
 CODEN: FIXXAP
 DOCUMENT TYPE: Patent
 LANGUAGE: Finnish
 FAMILY ACC. NUM. COUNT: 1
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
FI 98943	B	19970530	FI 1996-125	19960110
FI 98943	C	19970910		
EP 784119	A1	19970716	EP 1997-660001	19970103

R: AT, BE, DE, FR, GB, IT, NL, SE

CA 2194803 AA 19970711 CA 1997-2194803 19970110

FI 1996-125 19960110

PRIORITY APPLN. INFO.: AB The org. pigment is an aq.-phase polymn. product of polymerizable monomers and modified starch, having glass transition temp. $\geq 50^{\circ}\text{C}$. The method improves the printability, appearance, and fiber pull-out resistance of the paper and cardboard. To water of 70°C . 470 were added enzyme AA-20 (α -amylase) 0.23 and Raisamyl 302 (NaOCl-**oxidized potato starch**) 197.4 g. The soln. was mixed with CuSO₄ 0.06 and Aerosol DPOS-45 (**anionic alkylbenzenesulfonate-type surfactant**) 7.94 g. Under flowing N, the mixt. was mixed with aq. H₂O₂ (3.91 g 30% H₂O₂ in 31 mL water) and styrene. After cooling the org. pigment dispersion obtained had solids content 45.6 wt.%, pH 4.2, room-temp. viscosity 106 mPa.s, and particle size 215 nm.

L89 ANSWER 18 OF 78 CAPLUS COPYRIGHT 2002 ACS

ACCESSION NUMBER: 1998:125820 CAPLUS

DOCUMENT NUMBER: 128:155757

TITLE: Effect of oxidizing agents on quality of corn starch adhesive

AUTHOR(S): Zhai, Guangyu

CORPORATE SOURCE: The Medical School Affiliated to Henan Medical University, Zhengzhou, 450052, Peop. Rep. China

SOURCE: Huaxue Yu Nianhe (1997), (4), 237-239

PUBLISHER: CODEN: HYZHENG; ISSN: 1001-0017

DOCUMENT TYPE: Journal

LANGUAGE: Chinese

AB Effects of pH, temp., and catalyst on oxidn. of corn starch with KMnO₄, H₂O₂, and NaClO and the storage life of the corn starch adhesive were studied. The oxidizing ability of the oxidizing agents was enhanced with increasing temp. for all the 3 oxidizing agents, and with decreasing pH for KMnO₄ and H₂O₂, but with increasing pH for NaClO. The storage stability was the best when H₂O₂ was used.

L89 ANSWER 19 OF 78 CAPLUS COPYRIGHT 2002 ACS

ACCESSION NUMBER: 1998:91714 CAPLUS

DOCUMENT NUMBER: 128:129397

TITLE: Development of maize starch adhesive

AUTHOR(S): Huang, Dengye; Gu, Qisheng; Huang, Xianzhang; Ma, Huixuan

CORPORATE SOURCE: Department of Life Science, Shanxi University, Taiyuan, 030006, Peop. Rep. China

SOURCE: Huaxue Yu Nianhe (1997), (3), 174-177

PUBLISHER: CODEN: HYZHENG; ISSN: 1001-0017

DOCUMENT TYPE: Journal

LANGUAGE: Chinese

AB A process for manuf. of maize starch adhesive by oxidn. with H₂O₂ in the presence of catalyst FeSO₄ was presented.

L89 ANSWER 20 OF 78 CAPLUS COPYRIGHT 2002 ACS

ACCESSION NUMBER: 1997:150883 CAPLUS

DOCUMENT NUMBER: 126:158944

TITLE: Antibacterial paper containing cationic microbicides immobilized on carboxymethylcellulose

INVENTOR(S): Kabasawa, Eriko; Oosawa, Junji

PATENT ASSIGNEE(S): Shinoji Seishi Kk, Japan

SOURCE: Jpn. Kokai Tokkyo Koho, 5 pp.
 CODEN: JKXXAF
 DOCUMENT TYPE: Patent
 LANGUAGE: Japanese
 FAMILY ACC. NUM. COUNT: 1
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 08325103	A2	19961210	JP 1995-128634	19950526

AB Paper is manufd. using sizes for neutral papermaking. Thus, a mixt. of Kiccolate CMC-BE (CMC benzalkonium salt) 3.8, softwood bleached kraft pulp 20.0, and hardwood bleached kraft pulp 76.2% was mixed with antifoaming agent, Sizepine K 901 (**alkyl ketene dimer**) 0.25, an adhesive 0.5, and a strengthening agent 1.0%, made into paper, and size-pressed with **oxidized starch** to prep. paper with good printability and antibacterial effect.

L89 ANSWER 21 OF 78 WPIDS (C) 2002 THOMSON DERWENT
 ACCESSION NUMBER: 1997-098570 [09] WPIDS
 DOC. NO. CPI: C1997-031377
 TITLE: Prodn. of **oxidised dextrin-contg.**
starch, used e.g. in prodn. of cardboard - by processing with urea, and mixing with aq. soln. of **hydrogen peroxide**.
 DERWENT CLASS: A11 D17 F09
 INVENTOR(S): KOZLOVA, N YA; ZHZUKOVSKII, V N
 PATENT ASSIGNEE(S): (KOZL-I) KOZLOVA N YA
 COUNTRY COUNT: 1
 PATENT INFORMATION:

PATENT NO	KIND	DATE	WEEK	LA	PG
RU 2061701	C1	19960610	(199709)*		6

APPLICATION DETAILS:

PATENT NO	KIND	APPLICATION	DATE
RU 2061701	C1	SU 1992-5057648	19920804

PRIORITY APPLN. INFO: SU 1992-5057648 19920804
 AB RU 2061701 C UPAB: 19970228
 Starch is preliminary processed with urea in an amount of 1-16 % w.r.t. mass of starch at 80-90deg.C for 4-5 hour, and obtd. prod. is mixed with aq. soln. of **hydrogen peroxide** at 60-70deg.C for 1-2 hour with content of **hydrogen peroxide** in mixt. equal to 0.35-1.0 % w.r.t. mass of starch. Urea reacts with residuals of glucose in starch and forms the usual reaction prods. of carbonyl cpds. and amines, and intermediaries further react with molecules of starch which improves holding of starch on the surface of cardboard. In examples potato and maize starch are used. The mass fraction of nitrogen is 0.41-7.12 %, PH of soln. is 6.7-7.1, viscosity of 0.5% soln. is 1.8-6.0 Pa.s, and prod. output is 89-98 %. Tests are carried out with two types of starch: common potato starch, and **oxidised modified starch**.
 Prepn. of adhesive emulsions are obtd. without difficulties.
 Average value of resistance to laminar separation is increased from 125 N without interlaminar impregnation to 150 N with interlaminar impregnation.
 USE - In methods of prodn. of **oxidised starch**

which can be used as binder in prodn. of cardboard with whiting, impregnation in mass and on surface, for increased interlaminar strength of cardboard.

ADVANTAGE - Simplified process of obtaining of oxidised starch, and also yields starch with reduced viscosity, for improved strength properties of cardboard. The resistance to sepn. in layers is increased by 20% w.r.t. common starch.

Dwg. 0/0

L89 ANSWER 22 OF 78 CAPLUS COPYRIGHT 2002 ACS DUPLICATE 4
 ACCESSION NUMBER: 1995:607912 CAPLUS
 DOCUMENT NUMBER: 123:86406
 TITLE: Process for incorporation of a calcium carbonate filler, enhancing sizing efficiency in filled papers and method for making paper
 INVENTOR(S): Kurrle, Frederick L.
 PATENT ASSIGNEE(S): Westvaco Corp., USA
 SOURCE: U.S., 7 pp.
 CODEN: USXXAM
 DOCUMENT TYPE: Patent
 LANGUAGE: English
 FAMILY ACC. NUM. COUNT: 1
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 5411639	A	19950502	US 1993-136265	19931015
US 5514212	A	19960507	US 1994-343717	19941122
PRIORITY APPLN. INFO.:			US 1993-136265	19931015
AB A process for incorporation of a CaCO ₃ filler into a fibrous material, e.g. cellulose fibers, comprises reacting an aq. slurry of the filler with 1.5-30.0 parts of a starch-soap complex/100 parts filler, wherein the starch is oxidized or nonmodified, either before or after introduction of the filler, into a furnish of the fibrous material to ppt. the complex on the surfaces of the filler. Cooked corn starch was heated with a soap and metered into a CaCO ₃ slurry to produce a surface treated pigment. The surface treated pigment (1.50 starch/100 parts CaCO ₃) was incorporated into a bleached kraft fiber contg. other additives including alkyl ketene dimer to give an initial Hercules size test 225 s and 106 s after 4 wk, compared to 41 and 15, resp., for CaCO ₃ not surface treated. The use of the surface treated pigment also allows the papermaker to increase the filler content of the paper without sacrificing dry strength properties.				

L89 ANSWER 23 OF 78 CAPLUS COPYRIGHT 2002 ACS
 ACCESSION NUMBER: 1996:714119 CAPLUS
 DOCUMENT NUMBER: 124:149111
 TITLE: Use of zirconium salts to improve surface sizing efficiency in paper making
 INVENTOR(S): Pandian, Verson E.; Calcar, Dan V.; Wolff, Bernard W.
 PATENT ASSIGNEE(S): Hopton Technologies, Inc., USA
 SOURCE: U.S., 11 pp. Cont.-in-part of U.S. 5,362,573.
 CODEN: USXXAM
 DOCUMENT TYPE: Patent
 LANGUAGE: English
 FAMILY ACC. NUM. COUNT: 2
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
-----	---	-----	-----	-----

US 5472485	A	19951205	US 1994-286505	19940805
US 5362573	A	19941108	US 1993-11488	19930128
WO 9609345	A1	19960328	WO 1995-US10283	19950807

W: AU, BR, CA, FI, JP, KR, NO, NZ

RW: AT, BE, CH, DE, DK, ES, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE

AU 9532440	A1	19960409	AU 1995-32440	19950807
------------	----	----------	---------------	----------

PRIORITY APPLN. INFO.:

US 1993-11488	19930128
US 1994-308574	19940919
WO 1995-US10283	19950807

AB New sizing compns. contg. (a) a compd. selected from alkenylsuccinic anhydrides, alkylketene dimers and their mixts. and (b) a metal salt selected Zr, Hf, Ti and their mixts. are described. The use of the above compns. during paper making prevents the surface size polymer from penetrating into the paper and paperboard before it is dried and cured, thereby sealing their surface and provides paper products having superior liq. storage properties, esp. for liq. foods, e.g. milk, juices, etc. For example, an aq. emulsion of 166.8 lb alkylketene dimer in a dispersion of 333.6 (dry basis) **oxidized cationic starch** in 200 gal H₂O contg. 20 lb ammonium zirconium carbonate (AZCote5800 m) (I) when applied at 3.0 lb/ton of paper furnish together with 6.7 dry lb/ton of a quaternary **cationic potato starch** (retention aid) in a 144 lbs/3000 ft² sheet gave H₂O₂ absorption of 0.5 kg/m² in a test on paper for liq. packaging, vs. 0.71 for paper surface-sized with a similar compn. without I.

L89 ANSWER 24 OF 78 CAPLUS COPYRIGHT 2002 ACS

ACCESSION NUMBER: 1995:797614 CAPLUS

DOCUMENT NUMBER: 123:202653

TITLE: Thermochemically modified starch **binders** for coatings on printing **paper** with enhanced brightness

INVENTOR(S): Suzuki, Kunio; Ishama, Takeyuki

PATENT ASSIGNEE(S): Mitsubishi Paper Mills Ltd, Japan

SOURCE: Jpn. Kokai Tokkyo Koho, 7 pp.

CODEN: JKXXAF

DOCUMENT TYPE: Patent

LANGUAGE: Japanese

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 07189189	A2	19950725	JP 1993-335523	19931228

AB The colorless starch **binders** are obtained by thermochem. modifying an acetylated starch (preferably having substitution degree 0.03-0.1 and of tapioca origin) with persulfate oxidants, then bleaching the resulting fluidizable product with 0.2-2.0% H₂O₂ in the presence of 0.2-2.0% NaOH.

L89 ANSWER 25 OF 78 WPIDS (C) 2002 THOMSON DERWENT

ACCESSION NUMBER: 1997-204171 [19] WPIDS

DOC. NO. CPI: C1997-065674

TITLE: Instant-drying composite gum made from starch.

DERWENT CLASS: A11 A81 E11 G03

INVENTOR(S): CHEN, B; WEN, T

PATENT ASSIGNEE(S): (WENT-I) WEN T

COUNTRY COUNT: 1

PATENT INFORMATION:

PATENT NO	KIND	DATE	WEEK	LA	PG
CN 1097449	A	19950118 (199719)*			3

APPLICATION DETAILS:

PATENT NO	KIND	APPLICATION	DATE
CN 1097449	A	CN 1993-111491	19930710

PRIORITY APPLN. INFO: CN 1993-111491 19930710

AB CN 1097449 A UPAB: 19970512

The composite starch adhesive for pasting corrugated paperboard is prepared, with starch gum, compound binder and tributyl phosphate, by stirring, heating, oxidising and compounding. The starch gum contains starch, sodium hydroxide, hydrogen peroxide, borax and water. The compound binder is prepd. by heating a mixture of polyvinyl alcohol, formaldehyde, hydrochloric acid and water. The composite starch adhesive shows a drying speed 3 times faster than that of conventional types, low cost and less consumption.

Dwg.0

L89 ANSWER 26 OF 78 WPIDS (C) 2002 THOMSON DERWENT

ACCESSION NUMBER: 1997-203992 [19] WPIDS

DOC. NO. CPI: C1997-065539

TITLE: Quick making high-grade maize adhesive at normal atmospheric temp..

DERWENT CLASS: A81 G03

INVENTOR(S): CHEN, W

PATENT ASSIGNEE(S): (CHEN-I) CHEN W

COUNTRY COUNT: 1

PATENT INFORMATION:

PATENT NO	KIND	DATE	WEEK	LA	PG
CN 1097206	A	19950111 (199719)*			

APPLICATION DETAILS:

PATENT NO	KIND	APPLICATION	DATE
CN 1097206	A	CN 1993-111494	19930708

PRIORITY APPLN. INFO: CN 1993-111494 19930708

AB CN 1097206 A UPAB: 19970512

The invention provides a method for quick preparing high-quality maize adhesive at ordinary temp.. The method uses the function of that potassium permanganate and hydrogen peroxide can react in dilute sulphuric acid and quickly release oxygen to make the maize starch oxidate and make it into oxidised starch with a certain oxidation depth, and then the oxidised starch is quickly dextrinized in an alkali liquor whose concentration is higher and then is diluted by adding water, and then other ingredients of cross-linking agent, etc. are added, so that the invented product can be made up. It is characterized by that it uses general warm water to make preparation, so it is simple in preparation and equipment and easy in operation.

Dwg.0

L89 ANSWER 27 OF 78 CAPLUS COPYRIGHT 2002 ACS
 ACCESSION NUMBER: 1995:306809 CAPLUS
 DOCUMENT NUMBER: 122:79422
 TITLE: Oxidation of potato starch by hydrogen peroxide
 AUTHOR(S): Parovuori, Petteri; Hamunen, Antti; Forssell, Pirkko;
 Autio, Karin; Poutanen, Kaisa
 CORPORATE SOURCE: VTT Biotechnol. Food Res., Antti Hamunen, 02044,
 Finland
 SOURCE: Starch/Staerke (1995), 47(1), 19-23
 CODEN: STARDD; ISSN: 0038-9056

DOCUMENT TYPE: Journal
 LANGUAGE: English
 AB Potato starch was oxidized by hydrogen peroxide in alk. and acidic reaction conditions with copper, iron and tungstate catalysts in order to introduce carboxyl and carbonyl groups in the starch mol. Carbonyl contents up to 6.6 per 100 glucose units could be obtained, whereas carboxyl content remained low (up to 1.4). Starch yields in the alk. and acidic reactions were 90 and 99%, resp. The mol. wt. decreased markedly with the degree of oxidn., and was dependent on the catalyst used. Rheol. measurements revealed that when the mol. wt. of the moderately oxidized starch was high, a very firm gel ($G' = 40\text{kPa}$) was obtained with 25% starch concn. When the degree of oxidn. increased, the storage modulus G' decreased. The more oxidized starch contained carbonyl groups, the higher was the gelatinization temp.

L89 ANSWER 28 OF 78 WPIDS (C) 2002 THOMSON DERWENT
 ACCESSION NUMBER: 1994-259513 [32] WPIDS
 DOC. NO. CPI: C1994-118200
 TITLE: Substitute for lipid for dressings or desserts - consists of oxidised starch of e.g. tapioca, potato, corn etc.
 DERWENT CLASS: D13
 PATENT ASSIGNEE(S): (SIKI) SHIKISHIMA STARCH KK; (SHOS) SHOWA SANGYO CO
 COUNTRY COUNT: 1
 PATENT INFORMATION:

PATENT NO	KIND	DATE	WEEK	LA	PG
JP 06189699	A	19940712	(199432)*		14

APPLICATION DETAILS:

PATENT NO	KIND	APPLICATION	DATE
JP 06189699	A	JP 1992-361937	19921225

PRIORITY APPLN. INFO: JP 1992-361937 19921225
 AB JP 06189699 A UPAB: 19940928
 Substitute comprises an oxidised starch eg tapioca starch, potato starch, corn starch, and waxy corn starch, in which the starch is oxidised by an oxidiser.
 USE - Used for making dressings or frozen desserts.
 Dwg.0/0

L89 ANSWER 29 OF 78 WPIDS (C) 2002 THOMSON DERWENT
 ACCESSION NUMBER: 1994-077674 [10] WPIDS

DOC. NO. NON-CPI: N1994-060608
 DOC. NO. CPI: C1994-035426
 TITLE: Transfer paper for electrophotography with easy multiple withdrawal from stack - contains calcium carbonate filler, alkyl ketene dimer, and a poly acrylamide contg. cyclic secondary amine functional gp.
 DERWENT CLASS: A89 E17 F09 G08 P84 S06
 PATENT ASSIGNEE(S): (MITY) MITSUBISHI PAPER MILLS LTD
 COUNTRY COUNT: 1
 PATENT INFORMATION:

PATENT NO	KIND	DATE	WEEK	LA	PG
JP 06027712	A	19940204	(199410)*		5

APPLICATION DETAILS:

PATENT NO	KIND	APPLICATION	DATE
JP 06027712	A	JP 1992-182576	19920709

PRIORITY APPLN. INFO: JP 1992-182576 19920709

AB JP 06027712 A UPAB: 19940421

The paper comprises CaCO₃ as filler, alkyl ketene dimer of 0.05-0.10% and polyacrylamide contg. cyclic secondary amine as the functional gp. 0.03-0.1% (w.r.t. pulp).

The deviation coefft. of the paper withdrawing power, withdrawing one paper from the piled-up paper, is within 2.8%.

USE/ADVANTAGE - Prevents trouble of withdrawing multiple paper from the piled up paper at the same time in an electrophotographic copier.

In an example, the slurry: LBKP+NBKP(7:3) 100 parts, CaCO₃ 7 parts, alkylketene dimer 0.05 parts, cationic starch 0.7 parts, polyacrylamide contg. the cyclic secondary amine 0.1 parts. The paper is made by using the slurry in the paper machine. The oxidised starch of 1.2 g/m² is coated on the paper.

Dwg. 0/0

L89 ANSWER 30 OF 78 CAPLUS COPYRIGHT 2002 ACS
 ACCESSION NUMBER: 1994:247698 CAPLUS
 DOCUMENT NUMBER: 120:247698
 TITLE: Technological evaluation of nitrogen-containing starch derivatives as sizing agents
 AUTHOR(S): Hebeish, A.; Ragheb, A. A.; Refai, R.; Saad, M. A.; Abd El-Thalouth, I.
 CORPORATE SOURCE: Text. Res. Div., Natl. Res. Cent., Cairo, Egypt
 SOURCE: Starch/Staerke (1994), 46(3), 109-13
 CODEN: STARDD; ISSN: 0038-9056
 DOCUMENT TYPE: Journal
 LANGUAGE: English
 AB The structural changes caused by introducing different N-contg. groups via cyanoethylation, carbamoylation, and carbamation in the mols. of rice and maize starches before and after oxidn. and the effects of these changes on the tech. properties of yarns sized with such starch products were studied. The apparent viscosity of pastes prep'd. from the modified products depended on the nature of the starch, the degree of oxidn. prior to chem. modification, and the nature of the modification, as well as the test conditions, i.e. the rate of shear and temp. Cotton yarns sized with these starch derivs.

were measured for yarn no., tensile strength, C.V.%, elongation at break, and C.V.% in elongation. In addn., the weavability test, the min. no. of cycles due to abrasion (St1), av. no. of cycles due to abrasion (St6) and cyclical elongation % were measured. A comparison among **modified** starches prep'd. from rice starch revealed that the highest value of St1 was obtained with yarns sized using a carbamoylethylated starch prep'd. from unoxidized starch. In the case of maize starch, the highest value of St1 was obtained with cotton yarns sized using carbamoylethylated starch derived from starch oxidized by 1 g/L active Cl.

L89 ANSWER 31 OF 78 CAPLUS COPYRIGHT 2002 ACS
 ACCESSION NUMBER: 1996:515220 CAPLUS
 DOCUMENT NUMBER: 125:250809
 TITLE: Good-quality **oxidized starch adhesive**
 AUTHOR(S): Yue, Shide; Tang, Daolin; Gai, Yi; Lei, Wenbo
 CORPORATE SOURCE: Chongking Chem. Staff Workers Coll., Chungking, Peop. Rep. China
 SOURCE: Zhanjie (1994), 15(6), 24-27
 DOCUMENT TYPE: Journal
 LANGUAGE: Chinese
 AB **Oxidized starch adhesive** was prep'd. in the presence of H₂O₂, YT-II composite **catalyst**, and other additives. Factors affecting properties of the **adhesive** including types of starch, **catalyst**, oxidn. agent, reaction temp., and reaction time were studied by orthogonal exptl. design. Optimal formulation and prep'n. conditions were given.

L89 ANSWER 32 OF 78 CAPLUS COPYRIGHT 2002 ACS
 ACCESSION NUMBER: 1995:708330 CAPLUS
 DOCUMENT NUMBER: 123:86394
 TITLE: Manufacture of fluid food product packaging board
 INVENTOR(S): Makushina, Alla V.; Murzina, Galina A.; Kramar, Olga P.; Ostrovskaya, Ulyana L.; Rybalko, Lyubov P.; Magij, Mikhail Yu.; Brezhneva, Raisa T.; Mekhedov, Aleksej G.; Leontev, Anatolij I.; Et, Al.
 PATENT ASSIGNEE(S): Ukrainskij Nauchno-Issledovatel'skij Institut Tsnellyulozno-Bumazhnoj Promyshlennos, USSR; Proizvodstvennoe Ob'edinenie "Skytyvkarskij Lesopromyshlennyj Kompleks" im.Leninsk U.S.S.R. From: Izobreteniya 1993, (13), 47.
 SOURCE: CODEN: URXXAF
 DOCUMENT TYPE: Patent
 LANGUAGE: Russian
 FAMILY ACC. NUM. COUNT: 1
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
SU 1807147	A1	19930407	SU 1991-4934549	19910508

AB The surface strength of base paperboard is increased while decreasing the consumption of sizing substances by using an internal size based on **dimers of alkyl ketenes** and **polyaminoepichlorohydrin** and a surface size of **oxidized starch**.

L89 ANSWER 33 OF 78 CAPLUS COPYRIGHT 2002 ACS
 ACCESSION NUMBER: 1994:79376 CAPLUS

DOCUMENT NUMBER: 120:79376
 TITLE: Sizing agents for warp yarns for high-speed looms
 INVENTOR(S): Aoki, Takaaki; Nishida, Yoshitaka; Tanaka, Susumu; Yamada, Tetsuo
 PATENT ASSIGNEE(S): Honen Corp, Japan
 SOURCE: Jpn. Kokai Tokkyo Koho, 4 pp.
 CODEN: JKXXAF
 DOCUMENT TYPE: Patent
 LANGUAGE: Japanese
 FAMILY ACC. NUM. COUNT: 1
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 05186970	A2	19930727	JP 1991-359574	19911231

AB The title sizes comprise starch having min. viscosity (.eta.; concn. 10%, at 92.5.degree.) 100-1000 BU and starch having .eta. 1toreq.50 BU. Cotton warp yarns sized with a compn. contg. 50 parts 3:7 mixt. of starch with .eta. 160 BU and .alpha.-modified starch with .eta. 40 BU and 30 parts poly(vinyl alc.) exhibited good size adhesion to the yarn.

L89 ANSWER 34 OF 78 CAPLUS COPYRIGHT 2002 ACS
 ACCESSION NUMBER: 1995:494374 CAPLUS
 DOCUMENT NUMBER: 123:86468
 TITLE: Quick cold oxidation of starch and manufacture of adhesives therewith
 INVENTOR(S): Jiang, Xueyi
 PATENT ASSIGNEE(S): Peop. Rep. China
 SOURCE: Faming Zhuanli Shengqing Gongkai Shuomingshu, 8 pp.
 CODEN: CNXXEV
 DOCUMENT TYPE: Patent
 LANGUAGE: Chinese
 FAMILY ACC. NUM. COUNT: 1
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
CN 1077458	A	19931020	CN 1992-102818	19920414

AB A process includes suspending 40-55% starch in water, gelatinizing with a 6-15% NaOH soln., and oxidizing with (NH4)2S2O8 or FeSO4 as the initiator and H2O2 or NaOCl as the oxidizing agent under light. Thus, an adhesive for corrugated paperboard was prep'd. from starch 100, NaOH 14, (NH4)2S2O8 4, H2O2 1, borax 5, and water 600 parts.

L89 ANSWER 35 OF 78 WPIDS (C) 2002 THOMSON DERWENT
 ACCESSION NUMBER: 1993-340295 [43] WPIDS
 DOC. NO. CPI: C1993-151226
 TITLE: Neutral paper having good ink fixing property - is obtd. by applying styrene -acrylic acid copolymer to neutral paper contg. calcium carbonate filler and alkyl ketene dimer as internal sizing agent.
 DERWENT CLASS: A82 F09 G02
 PATENT ASSIGNEE(S): (MITY) MITSUBISHI PAPER MILLS LTD
 COUNTRY COUNT: 1
 PATENT INFORMATION:

PATENT NO	KIND	DATE	WEEK	LA	PG
JP 05247888	A	19930924 (199343)*		3	

APPLICATION DETAILS:

PATENT NO	KIND	APPLICATION	DATE
JP 05247888	A	JP 1992-51932	19920310

PRIORITY APPLN. INFO: JP 1992-51932 19920310

AB JP 05247888 A UPAB: 19931207

Neutral paper is obtd. by applying a surface sizing agent consisting mainly of styreneacrylic acid copolymer to the surface of neutral paper contg. CaCO₃ as a filler and alkyl ketene dimer or alkenyl succinic anhydride as internal sizing agent.

In an example, pptd. CaCO₃ (7 pts.), alkyl ketene dimer (0.1 pt.) and amphoteric starch (0.8 pt.) were added to a mixt. of hardwood BKP (70 pts., 380 CSF) and softwood BKP (30 pts., 450 ml CSF), and the mixt. was hand made into a sheet (basis wt. 64 g/m²). The sheet was coated with a mixt. of styrene-acrylic acid copolymer and oxidised starch in amt. such that the former is 0.01 g/m² and the latter is 1.7 g/m². The obtd. neutral paper has good ink fixing property. On the other hand, handmade sheet not coated with the surface sizing agent had poor ink fixing property.

Dwg. 0/0

L89 ANSWER 36 OF 78 WPIDS (C) 2002 THOMSON DERWENT

ACCESSION NUMBER: 1993-305287 [39] WPIDS

DOC. NO. CPI: C1993-135815

TITLE: Cationic starch oxidn. to give amphoteric starch carrying carboxylic gps. - comprises selective oxidn. of terminal reducing gps. using hydrogen peroxide and hydro bromic acid or bromine , used in paper mfr..

DERWENT CLASS: A11 A97 F09

INVENTOR(S): DEFAYE, J; GADELLE, A; KERVENNAL, J; SUC, S

PATENT ASSIGNEE(S): (AQOR) ELF ATOCHEM SA; (SUCCS-I) SUC S

COUNTRY COUNT: 20

PATENT INFORMATION:

PATENT NO	KIND	DATE	WEEK	LA	PG
EP 562927	A1	19930929	(199339)*	FR	10
R: AT BE CH DE DK ES FR GB IT LI NL PT SE					
AU 9335352	A	19930930	(199347)		
FR 2688787	A1	19930924	(199347)		20
NO 9301028	A	19930924	(199347)		
FI 9301256	A	19930924	(199349)		
CA 2092141	A	19930924	(199350)	FR	
JP 06009706	A	19940118	(199407)		8
JP 06094482	B2	19941124	(199445)		8
US 5383964	A	19950124	(199510)		6
NZ 247202	A	19950427	(199522)		
US 5417755	A	19950523	(199526)		6
AU 660074	B	19950608	(199531)		
EP 562927	B1	19960703	(199631)	FR	10
R: AT BE CH DE DK ES FR GB IT LI NL PT SE					
DE 69303403	E	19960808	(199637)		
ES 2089745	T3	19961001	(199645)		
CA 2092141	C	19970422	(199729)	FR	
FI 103578	B1	19990731	(199936)		

NO 306118 B1 19990920 (199945)

APPLICATION DETAILS:

PATENT NO	KIND	APPLICATION	DATE
EP 562927	A1	EP 1993-400713	19930319
AU 9335352	A	AU 1993-35352	19930322
FR 2688787	A1	FR 1992-3465	19920323
NO 9301028	A	NO 1993-1028	19930322
FI 9301256	A	FI 1993-1256	19930322
CA 2092141	A	CA 1993-2092141	19930322
JP 06009706	A	JP 1993-88123	19930323
JP 06094482	B2	JP 1993-88123	19930323
US 5383964	A	US 1993-35362	19930322
NZ 247202	A	NZ 1993-247202	19930319
US 5417755	A Cont of	US 1993-35362	19930322
		US 1994-262898	19940621
AU 660074	B	AU 1993-35352	19930322
EP 562927	B1	EP 1993-400713	19930319
DE 69303403	E	DE 1993-603403	19930319
		EP 1993-400713	19930319
ES 2089745	T3	EP 1993-400713	19930319
CA 2092141	C	CA 1993-2092141	19930322
FI 103578	B1	FI 1993-1256	19930322
NO 306118	B1	NO 1993-1028	19930322

FILING DETAILS:

PATENT NO	KIND	PATENT NO
JP 06094482	B2 Based on	JP 06009706
US 5417755	A Cont of	US 5383964
AU 660074	B Previous Publ.	AU 9335352
DE 69303403	E Based on	EP 562927
ES 2089745	T3 Based on	EP 562927
FI 103578	B1 Previous Publ.	FI 9301256
NO 306118	B1 Previous Publ.	NO 9301028

PRIORITY APPLN. INFO: FR 1992-3465 19920323

AB EP 562927 A UPAB: 19931123

Starch (I) is oxidised by reaction in aq. soln. with H₂O₂ and HBr or Br₂, to selectively oxidise the terminal reducing gps. and the reducing gps. of the acid hydrolysis prods., to carboxylic gps.

Also claimed are amphoteric starches (II), which carry carboxylic gps. and cationic gps., with the carboxylic gps. obtd. by selective oxidn. of the terminal hemiacetal gps. of a cationic starch and opt. of the hemiacetal gps. of the acid hydrolysis prods.

The cationic gps. on (I) are pref. quat. ammonium gps. The aq. soln. of (I), H₂O₂ and halogen cpd. is pref. held at pH below 7 (4-6), and at 20-60 deg. C. the pref. molar ratio of H₂O₂ : Br₂ is 1-200, of H₂O₂:HBr is 0.5-100, and of H₂O₂ : anhydroglucose units in (I) is 0.1-10. After the oxidn., the aq. soln. is pref. treated in order to isolate (II) as a solid ppt., esp. by addn. of an alcohol, pref. (m)ethanol.

USE - (II) are used esp. in paper mfr.

In an example, at 20 deg. C, 0.5 ml. of a 40% aq. soln. of HBr was added to a soln. of 5 g of "SSta-Lok" 180 (RTM):: quat. ammonium salt of

starch) in 5 ml of a 30% H₂O₂ soln. After stirring for 5 hrs., 250 ml of CH₃OH was added, and the ppt. was sepd. and dried, giving 5 g of a prod. with 0.15% of carboxylic gps., degree of cationic substn. of 0.03 and viscosity 7.34 square mm/sec. (0.5 wt.% soln.).
Dwg. 0/0

L89 ANSWER 37 OF 78 WPIDS (C) 2002 THOMSON DERWENT
 ACCESSION NUMBER: 1992-296371 [36] WPIDS
 DOC. NO. NON-CPI: N1992-226592
 DOC. NO. CPI: C1992-132294
 TITLE: Electrophotographic transfer paper having good sizing and toner-fixing properties - contains calcium carbonate filler, alkyl-ketene dimer or alkenyl-succinic anhydride as internal sizing agent and surface sizing agent contg. styrene -acrylic acid copolymer.
 DERWENT CLASS: A89 E13 E17 F09 G08 P84 S06
 PATENT ASSIGNEE(S): (MITY) MITSUBISHI PAPER MILLS LTD
 COUNTRY COUNT: 1
 PATENT INFORMATION:

PATENT NO	KIND	DATE	WEEK	LA	PG
JP 04204746	A	19920727	(199236)*		5
JP 3053109	B2	20000619	(200033)		4

APPLICATION DETAILS:

PATENT NO	KIND	APPLICATION	DATE
JP 04204746	A	JP 1990-337232	19901130
JP 3053109	B2	JP 1990-337232	19901130

FILING DETAILS:

PATENT NO	KIND	PATENT NO
JP 3053109	B2 Previous Publ.	JP 04204746

PRIORITY APPLN. INFO: JP 1990-337232 19901130

AB JP 04204746 A UPAB: 19931112

Transfer paper contains CaCO₃ as filler, alkylketene dimer or alkenylsuccinic anhydride as an internally added sizing agent and a surface sizing agent which contains styrene-acrylic copolymer as the main component, on the surface.

The content of the styrene is pref. 0.30-0.60 pts. wt. per 1 pt. wt. of the surface sizing agent. The amt. of the surface sizing agent is 0.01-0.1g/m².

USE/ADVANTAGE - For copying machine, continuous printer, facsimile, full colour copying machine etc. The electrophotographic transfer paper has good fixing properties and good sizing properties.

In an example, 16 pts. wt. styrene, 39 pts. wt. N,N-dimethylaminopropyl acrylamide, 50 pts. wt. toluene and 3.3 wt. pts. AIBN were polymerised at 90 deg.C for 4 hr. After the reaction mixt. had been distilled under vacuum to remove the toluene, The residue was neutralised with aq. ammonia to obtain the objective styrene-acrylic acid copolymer contg. 15 wt. % of styrene. A mixed pulp of 70 pts. wt. LBKP and 30 pts. wt. NBKP was mixed with 7 pts. wt. lightwt. CaCO₃ 0.1 pt. wt. alkylketene dimer sizing agent and 0.8 pt. wt. amphoteric starch and made into sheet of coverage of 64 g/m². The sheet was dried at 90 deg.C for 5 min. On the

sheet was applied 1.7 g.m² of an oxidised starch and 0.05 g/m² of the surface sizing agent prep'd. above by a sizing press. The resultant paper was calendered until the surface smoothness became 80 sec. The paper had good toner-fixing properties and good sizing propempl Dwg. 0/0

L89 ANSWER 38 OF 78 WPIDS (C) 2002 THOMSON DERWENT
 ACCESSION NUMBER: 1991-065390 [09] WPIDS
 DOC. NO. NON-CPI: N1991-050597
 DOC. NO. CPI: C1991-027719
 TITLE: Binder compsn. used in prodn. of particle board and plywood - contains starch hydrolysate and has low formaldehyde emission.
 DERWENT CLASS: A11 A21 A81 F09 P63 P73
 INVENTOR(S): MUKHERJEE, S
 PATENT ASSIGNEE(S): (BORD) BORDEN INC
 COUNTRY COUNT: 1
 PATENT INFORMATION:

PATENT NO	KIND	DATE	WEEK	LA	PG
US 4992519	A	19910212	(199109)*		

APPLICATION DETAILS:

PATENT NO	KIND	APPLICATION	DATE
US 4992519	A	US 1989-304967	19890201

PRIORITY APPLN. INFO: US 1989-304967 19890201

AB US 4992519 A UPAB: 19930928

A polymeric binder (I) for use in prodn. of particle board and plywood with low formaldehyde-emission is claimed comprising the reaction prod. of: (a) 3-40 (pref. 4-25) wt.% of an acidified starch hydrolysate; (b) urea; and (c) formaldehyde in a molar ratio to the urea of 1:1-1.5:1. A process is also claimed for bonding lignocellulose material by applying (I) and 1-20 wt.% curing agent and then bonding at 100-200 deg.C and 1-30 kg/cm². Particle board (contg. 5-15 wt.% (I)) and plywood obtd. by this process are also claimed. (I) is applied to the plywood at a rate of 200-400 g (I)/m² contact surface area. Processes for prepn. of (I) are also claimed.

The starch is pref. selected from wheat flour, maize flour, rice starch, corn starch, potato starch, manioc starch, tapioca and oxidized starch. The curing agent is pref. selected from NH₄Cl, (NH₄)₂SO₄, NH₄NO₃, ammonium thiocyanate and Al(NO₃)₃. It may additionally comprise urea.

ADVANTAGE - Processes for prepn. of (I) are also claimed.

O/O

L89 ANSWER 39 OF 78 WPIDS (C) 2002 THOMSON DERWENT
 ACCESSION NUMBER: 1991-329416 [45] WPIDS
 DOC. NO. NON-CPI: N1991-252159
 DOC. NO. CPI: C1991-142510
 TITLE: Low friction coefft. transfer paper - contains friction coefft.-lowering component, e.g. alkyl ketene dimer.
 DERWENT CLASS: E15 G08 P84 S06
 PATENT ASSIGNEE(S): (TOSH-N) TOSHIBA INTERIJENTO TEKN; (TOKE) TOSHIBA KK

COUNTRY COUNT: 1
 PATENT INFORMATION:

PATENT NO	KIND	DATE	WEEK	LA	PG
JP 03220560	A	19910927	(199145)*		

APPLICATION DETAILS:

PATENT NO	KIND	APPLICATION	DATE
JP 03220560	A	JP 1990-15057	19900126

PRIORITY APPLN. INFO: JP 1990-15057 19900126

AB JP 03220560 A UPAB: 19930928

Transfer paper contains a friction coefft.-lowering component which lowers the friction coefft. between the component and its contact component, and which is formed on a base material.

The friction coefft.-lowering component is, e.g., coated layer of alkylketene dimer of formula (I). R = C₁₄H₂₉-C₁₆H₃₃. The transfer paper comprises, e.g., a base paper, a binder layer and a pigment layer which are formed on the surface of the base paper in order and an alkylketene dimer layer formed on the back of the base material. The pigment is, e.g., kaolin and the binder is, e.g. **oxidised starch**.

USE/ADVANTAGE - The transfer paper is useful for copying machines, printers, etc. The paper prevents paper-feeding problems, e.g., piling of paper, by lowering the friction coefft. between two sheets of paper to, e.g., 0.400.

0/0

L89 ANSWER 40 OF 78 WPIDS (C) 2002 THOMSON DERWENT

ACCESSION NUMBER: 1991-277185 [38] WPIDS

DOC. NO. CPI: C1991-120150

TITLE: Pressure sensitive **adhesive** for tape - contg. emulsion of pressure sensitive **adhesive** contg. **oxidised starch**, for good adhesion of tape and easily removed from adherend.

DERWENT CLASS: A81 G03

PATENT ASSIGNEE(S): (NAGM) NAGOYA YUKA KK

COUNTRY COUNT: 1

PATENT INFORMATION:

PATENT NO	KIND	DATE	WEEK	LA	PG
JP 03182580	A	19910808	(199138)*		

APPLICATION DETAILS:

PATENT NO	KIND	APPLICATION	DATE
JP 03182580	A	JP 1989-324392	19891213

PRIORITY APPLN. INFO: JP 1989-324392 19891213

AB JP 03182580 A UPAB: 19930928

Emulsion pressure sensitive **adhesive** contains **oxidised starch**. Pref. pressure sensitive **adhesive** emulsion may be selected from various natural or synthetic rubber latexes and synthetic resin emulsions, which show tackiness at normal temps. Emulsión may be

mixt., of emulsions and contain plasticisers, tackifiers, organic solvents, moisture conditioners, fillers, pigments and preservatives.

Oxidised starch is obt. by oxidising starch in aq. suspension with an oxidising agent selected from Cl₂, H₂O₂, hypochlorites and permanganates and contains carboxyls derived from prim. alcohol and ketone-gps. derived from sec. alcohol gps. **Oxidised starch** increases cohesion of adhesives and gives release property to adhesives. Pref. amt. is 0.1-30 wt.% to emulsion. It may be added in aq. phase before polymerisation or into prep'd. emulsion. Substrate may be selected from various plastic-, foamed plastic or synthetic resin impregnated fibrous-sheets and metal foils.

USE/ADVANTAGE - Used for mfg. pressure sensitive adhesive tapes which can be removed from adherents without leaving adhesive layer on surfaces of adherents even after transporting, surface treating or long storage. The adhesive shows good adhesion and can be easily peeled off from adherents. @ (5pp Dwg. No. 0/0)

L89 ANSWER 41 OF 78 CAPLUS COPYRIGHT 2002 ACS
 ACCESSION NUMBER: 1991:209450 CAPLUS
 DOCUMENT NUMBER: 114:209450
 TITLE: Sizes for heat-sensitive recording paper
 INVENTOR(S): Ogawa, Kenjiro; Kishimoto, Makio; Nakamura, Mikio
 PATENT ASSIGNEE(S): Kanzaki Paper Mfg. Co., Ltd., Japan
 SOURCE: Jpn. Kokai Tokkyo Koho, 8 pp.
 CODEN: JKXXAF
 DOCUMENT TYPE: Patent
 LANGUAGE: Japanese
 FAMILY ACC. NUM. COUNT: 1
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 02243386	A2	19900927	JP 1989-66685	19890317

AB Paper is sized with copolymers of diisobutylene (I) with <1 of maleic anhydride, maleic acid, maleate salt, or its partial esters and has dynamic wetting barrier -0.40 to 0 g. Thus, paper was sized with 0.1 g/m² ammonium maleate-I copolymer and 2.0 g/m² oxidized starch and had dynamic wetting barrier -0.25, color concn. 1.20, resistance to plasticizers good, and whiteness 75.7, compared with -0.35, 1.24, pore, and 76.0, resp., for using an alkyl ketene dimer.

L89 ANSWER 42 OF 78 WPIDS (C) 2002 THOMSON DERWENT
 ACCESSION NUMBER: 1990-243086 [32] WPIDS
 DOC. NO. CPI: C1990-105339
 TITLE: Speciality paper for postcards, etc. - has one side with good offset and gravure printability and other side with good letterpress and wood-cut printability.
 DERWENT CLASS: F09
 PATENT ASSIGNEE(S): (OJIP) OJI PAPER CO
 COUNTRY COUNT: 1
 PATENT INFORMATION:

PATENT NO	KIND	DATE	WEEK	LA	PG
JP 02169796	A	19900629 (199032)*			

APPLICATION DETAILS:

PATENT NO	KIND	APPLICATION	DATE
JP 02169796	A	JP 1988-322937	19881221

PRIORITY APPLN. INFO: JP 1988-322937 19881221

AB JP 02169796 A UPAB: 19930928

The speciality paper contg. at least 5.0 % of fillers has one side with pen-and-ink sizing deg. of at least 4.0 and higher smoothness and the other side with pen-and-ink sizing degree of up to 3.0 and lower smoothness.

USE/ADVANTAGE - The speciality paper is suitable for postcards and cards. One side has good offset and gravure printability while the other side has good letterpress and woodcut printability.

In an example, an **alkyl ketene dimer**

-type sizing agent (0.15 % of pulp), pptd. CaCO₃) (corresp. to 10 % ash content of paper), and cationised starch (0.5 % of pulp) are added to a pulp slurry (hardwood BKP : softwood BKP = 95 : 5, freeness 550 cc and the mixt. is made into paper. A felt surface is closely attached to the web in a dehydrating press to form a cloth-like roughness on the wire side of the wet web. After drying its wire side is coated with a 5.0 % soln. of **oxidised starch**, and its felt side is coated with a soln. of **oxidised starch**, PVA, and a sizing agent

(90:5:5). Then the coated paper is dried and calendered to obtain speciality paper. Its feld side has (1) smoothness of 13 secs. TAPPI standard T479 om-81 (2) sizing degree of 5 sec and good offset printability while its wire side has (1) of 9 sec, (2) of 3 sec and good woodcut printability. @

0/0

L89 ANSWER 43 OF 78 WPIDS (C) 2002 THOMSON DERWENT

ACCESSION NUMBER: 1990-034408 [05] WPIDS

DOC. NO. CPI: C1990-015197

TITLE: Mfg. **oxidised starch** for foodstuffs - by reacting starch with oxidant, adding alkaline lower alcohol, filtering, adding water, adjusting pH, filtering and washing.

DERWENT CLASS: D13

PATENT ASSIGNEE(S): (KOKU-N) KOKUSAN GIJUTSU KEN; (KOKU-N) KOKUSAN GIJUTSU KENKYUSHO

COUNTRY COUNT: 1

PATENT INFORMATION:

PATENT NO	KIND	DATE	WEEK	LA	PG
JP 01313501	A	19891219	(199005)*		4
JP 05045602	B	19930709	(199330)		3

APPLICATION DETAILS:

PATENT NO	KIND	APPLICATION	DATE
JP 01313501	A	JP 1988-142775	19880611
JP 05045602	B	JP 1988-142775	19880611

FILING DETAILS:

PATENT NO	KIND	PATENT NO
JP 05045602	B Based on	JP 01313501

PRIORITY APPLN. INFO: JP 1988-142775 19880611

AB JP 01313501 A UPAB: 19930928

Process comprises adding alkaline lower alcohol having 2C or more to oxidised starch prep'd. by reacting starch with an oxidant, keeping the alcohol suspension at temp. lower than the b.pt. of the alcohol, then filtering out the lower alcohol, adding water to the obtd. deoxidised starch, controlling pH of the aq. suspension of neutral or slightly alkaline condition, filtering and washing.

Pref. alkaline alcohol has pH, 11-12 and concn. 85-90%. Reaction is at 40-60 deg C, for 3-5 hrs. Raw starch is potato starch, sweet potato starch, tapioca starch, corn starch or wheat starch.

ADVANTAGE - Increases clarity of gelatinised oxidised starch liquor even after cooling.

O/O

L89 ANSWER 44 OF 78 WPIDS (C) 2002 THOMSON DERWENT

ACCESSION NUMBER: 1989-253954 [35] WPIDS

DOC. NO. NON-CPI: N1989-193577

DOC. NO. CPI: C1989-113196

TITLE: Ink jet recording material - contg. polyacrylamide, synthetic amorphous silica and or polyvinyl alcohol.

DERWENT CLASS: A14 A97 F09 G05 P75

PATENT ASSIGNEE(S): (MITY) MITSUBISHI PAPER MILLS LTD

COUNTRY COUNT: 1

PATENT INFORMATION:

PATENT NO	KIND	DATE	WEEK	LA	PG
JP 01186372	A	19890725	(198935)*		12
JP 07055580	B2	19950614	(199528)		9

APPLICATION DETAILS:

PATENT NO	KIND	APPLICATION	DATE
JP 01186372	A	JP 1988-1655	19880120
JP 07055580	B2	JP 1988-11655	19880120

FILING DETAILS:

PATENT NO	KIND	PATENT NO
JP 07055580	B2 Based on	JP 01186372

PRIORITY APPLN. INFO: JP 1988-1655 19880120; JP 1988-11655

AB JP 01186372 A UPAB: 19930923

Ink jet recording material contains (a) polyacrylamide with MW 10,000-500,000 (b) synthetic amorphous silica and/or (c) PVA.

BET specific surface area of synthetic amorphous silica is at least 180 m²/g refractive index is 1.43-1.48, and vol ave particle size of the sec agglomeration particle is at least 95% for 1-40 microns.

Saponification deg of PVA is at least 87 mol%, polymerisation deg is 300-2000. Polyacrylamide is cationic or nonionic. Recording material may contain filler (e.g., calcium carbonate, kaolin, talc, zinc, oxide, aluminum silicate, etc), binder (e.g., oxidised starch

CMC, HEC, casein, gelatin, etc), etc.

USE/ADVANTAGE - The recording material is recorded by using water

based ink contg substantive colour, acid dyestuff, basic dye, reactive dye and/or food additive dye. It improves preservation property.

0/0

L89 ANSWER 45 OF 78 CAPLUS COPYRIGHT 2002 ACS
 ACCESSION NUMBER: 1990:101062 CAPLUS
 DOCUMENT NUMBER: 112:101062
 TITLE: Preparation of starch-based adhesive
 INVENTOR(S): Mezynski, Leonard; Slawski, Michal
 PATENT ASSIGNEE(S): Centralne Laboratorium Przemyslu Ziemniaczanego, Pol.
 SOURCE: Pol., 8 pp.
 CODEN: POXXA7
 DOCUMENT TYPE: Patent
 LANGUAGE: Polish
 FAMILY ACC. NUM. COUNT: 1
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PL 144862	B1	19880730	PL 1986-258558	19860321

AB An aq. starch suspension is oxidized by using NaClO (contg. 3-5.5% active Cl) at .1toreq.35.degree. by decreasing pH from .apprx.11 to .apprx.4.5. The resulting 25% aq. oxidized starch soln. (viscosity 10-70 mPa-s at 75.degree.) is addnl. esterified, and the resulting depolymd. starch is dewatered, washed, and dried to the moisture content .1toreq.20%. Then, 8-20% urea and(or) NaNO₃ (anhyd. starch basis) is added, and the mixt. is homogenized. The product is suitable for bonding of fibers, and manuf. of sandpapers and adhesive tapes. Thus, 100 kg potato starch and NaClO (contg. 4.0 kg active Cl) were added to 120 L water, and the pH was decreased from 11.5 to 5 at 30.degree.. Then, esterification was done at pH 8-9.5 by using 4 L Ac₂O and NaOH. Then, starch was dehydrated and dried to moisture content 18%. The resulting starch (viscosity 45 mPa-s at 75.degree.) was mixed with 10 kg NaNO₃ and 5 kg urea and homogenized. The product was sol. in cold water and formed glossy coatings.

L89 ANSWER 46 OF 78 CAPLUS COPYRIGHT 2002 ACS
 ACCESSION NUMBER: 1989:233479 CAPLUS
 DOCUMENT NUMBER: 110:233479
 TITLE: Treatment of heavy calcium carbonate for paper coating
 INVENTOR(S): Furuta, Kiyotaka; Saijo, Yoshihiko; Wakizaka, Akira; Yokoyama, Kiyonori
 PATENT ASSIGNEE(S): Oji Paper Co., Ltd., Japan
 SOURCE: Jpn. Kokai Tokkyo Koho, 10 pp.
 CODEN: JKXXAF
 DOCUMENT TYPE: Patent
 LANGUAGE: Japanese
 FAMILY ACC. NUM. COUNT: 1
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 63225522	A2	19880920	JP 1987-228266	19870914
JP 2561097	B2	19961204		

PRIORITY APPLN. INFO.: JP 1986-239074 19861009
 AB The title process for obtaining coarse particle-free CaCO₃ with high water retention, providing coatings free from streaks or roll patterns and with reduced coating blade wear involves sand milling of

30-85%-solids heavy CaCO₃ dispersion to A = 0.05-0.7, B .ltoreq. -44.48A3 + 66.77A2 - 33.42A + 7.04, and B = 1.0-4.5, where A and B are surface area (m²/g) before and after milling, resp. Heavy CaCO₃ (A 0.05 m²/g; 75%-solids) was sand milled in the presence of an acrylic dispersant to B 4.4 m²/g and coarse particle (>5 .mu.) content 1.5% and used with kaolin, oxidized starch, and SBR latex to provide paper coatings with good surface smoothness and gloss.

L89 ANSWER 47 OF 78 CAPLUS COPYRIGHT 2002 ACS

ACCESSION NUMBER: 1989:233763 CAPLUS

DOCUMENT NUMBER: 110:233763

TITLE: Heat exchange elements for gas heat exchanger

INVENTOR(S): Saito, Naohide; Tamura, Junichi; Take, Shigeo;

Kurosawa, Masaji; Terada, Isao

PATENT ASSIGNEE(S): Nippon Oil Co., Ltd., Japan

SOURCE: Ger. Offen., 12 pp.

CODEN: GWXXBX

DOCUMENT TYPE: Patent

LANGUAGE: German

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
DE 3816466	A1	19881208	DE 1988-3816466	19880513

PRIORITY APPLN. INFO.: JP 1987-116793 19870515

AB The heat exchange element comprises a laminated plate or a honeycomb, formed from a plate prep'd. from acid-resistant glass fibers and an inorg. filler material. The plate is immersed in a suspension of the filler material contg. flakes of C glass as well as mica powder and SiO₂ or ZrO₂ powder. The coating is fixed with an org. binder, e.g., a vinyl acetate resin. The overall compn. of the plate is .gtoreq. 88% SiO₂ and ZrO₂. The heat exchanger comprises a heat exchange element with parallel flow paths or with orthogonal or crossflow paths for the gases. The surface binding of the filler material on the heat exchange element reduces the air permeability and increases the acid resistance, as shown in examples.

L89 ANSWER 48 OF 78 CAPLUS COPYRIGHT 2002 ACS

ACCESSION NUMBER: 1989:137397 CAPLUS

DOCUMENT NUMBER: 110:137397

TITLE: Adhesives for paper boxes and its preparation

INVENTOR(S): Lei, Hua

PATENT ASSIGNEE(S): Peop. Rep. China

SOURCE: Faming Zhuanli Shengqing Gongkai Shuomingshu, 7 pp.

CODEN: CNXXEV

DOCUMENT TYPE: Patent

LANGUAGE: Chinese

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
CN 86108849	A	19880803	CN 1986-108849	19861222

AB Adhesives are prep'd. from starch, NaOCl and H₂O₂ (oxidizing agents), FeSO₄ or Na sulfate (catalysts), Na thiosulfate or Na₂SO₃ (reducing agents), etc. Thus, water 400, 30% H₂O₂ 9.3, and starch 200 kg were stirred, mixed with 150 g 0.5% FeSO₄, stirred, mixed with 54 kg 10% NaOH, stirred

.apprx.1 h, defoamed with tri-Bu phosphate, and mixed with water 200, 40% borax 4, and 10% sodium thiosulfate 1.3 kg to prep. an adhesive.

L89 ANSWER 49 OF 78 CAPLUS COPYRIGHT 2002 ACS
 ACCESSION NUMBER: 1989:137398 CAPLUS
 DOCUMENT NUMBER: 110:137398
 TITLE: Preparation of starch adhesive for paperboard
 INVENTOR(S): Wang, Xiangeng; Zhao, Yongjin
 PATENT ASSIGNEE(S): Xinjiang Shihezi Agriculture College, Peop. Rep. China
 SOURCE: Faming Zhuanli Shenqing Gongkai Shuomingshu, 4 pp.
 CODEN: CNXXEV
 DOCUMENT TYPE: Patent
 LANGUAGE: Chinese
 FAMILY ACC. NUM. COUNT: 1
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
CN 86105145	A	19880217	CN 1986-105145	19860809
CN 1008106	B	19900523		

AB Adhesives are prepd. by oxidizing starch with H₂O₂, gelatinizing with NaOH, neutralizing with acids, and mixing with stabilizers. Thus, 100 g cornstarch in 200 mL water was heated to 45-15.degree., mixed with 2 g FeSO₄ at 40.degree., oxidized with 20 mL water contg. 4 mL 30% H₂O₂, mixed with 8 mL water at pH 3-4, gelatinized with 65-70 mL 10% aq. NaOH, neutralized with H₂SO₄ to pH 7-8, mixed with 1-2 g borax and 4-13 g urea-formaldehyde resin, and dild. with water to prep. an adhesive.

L89 ANSWER 50 OF 78 CAPLUS COPYRIGHT 2002 ACS
 ACCESSION NUMBER: 1989:233423 CAPLUS
 DOCUMENT NUMBER: 110:233423
 TITLE: Effects of oxidized and cationic starch at the size press on sizing degree and strength properties of paper
 AUTHOR(S): Lee, Chang Jeon; Shin, Dong So
 CORPORATE SOURCE: Coll. Agric., Seoul Natl. Univ., Suwon, 440-744, S. Korea
 SOURCE: Palpu, Chongi Gisul (1988), 20(2), 5-16
 CODEN: PCGIDY; ISSN: 0253-3200
 DOCUMENT TYPE: Journal
 LANGUAGE: Korean

AB Oxidized starch size penetrated and was almost evenly distributed within a paper sheet, but cationic starch remained on the surface. Oxidized-cationic mixts. in ratio 1:1 and 3:1 penetrated deeply, but were less evenly distributed within the sheet than oxidized starch only. The more alkyl ketene dimer (AKD) was added, the less was the Cobb sizing effect. Cationic starch gave the highest Cobb value, followed by mixed starch with 1:1 ratio, oxidized starch, and mixed starch with 3:1 ratio. As the concn. of surface size was increased, the effect of sizing degree was decreased. As the amt. of AKD added to oxidized starch was increased, the internal bonding strength of the sheets was decreased. For mixed starches and cationic starch, the strength was decreased and then increased at the level of 0.02% AKD addn. Oxidized starch provided the highest strength followed by 3:1 starch and cationic starch, while 1:1 starch had no effect at 5% addn. Oxidized starch with the largest wax pick-up gave the highest surface strength, and cationic starch

the lowest. As the concn. of starch increased, both tensile strength and burst strength increased. For strength improvement, **oxidized starch** was the best, followed by 3:1 starch, 1:1 starch, and cationic starch in order.

L89 ANSWER 51 OF 78 CAPLUS COPYRIGHT 2002 ACS
 ACCESSION NUMBER: 1987:578459 CAPLUS
 DOCUMENT NUMBER: 107:178459
 TITLE: Manufacture of paper supports for abrasives
 INVENTOR(S): Rusan, Viorica; Pomponiu, Georgeta; Ioan, Silvia;
 Diaconescu, Margareta; Stoleriu, Aurel; Sfrijan,
 Vasile; Cotofana, Cornelius
 PATENT ASSIGNEE(S): Intreprinderea de Hirtie, Busteni, Rom.
 SOURCE: Rom., 2 pp.
 CODEN: RUXXA3
 DOCUMENT TYPE: Patent
 LANGUAGE: Romanian
 FAMILY ACC. NUM. COUNT: 1
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
RO 89806	B1	19860730	RO 1984-116028	19841018

AB Water-resistant paper supports for abrasives are prepd. from 30:70 hardwood-softwood pulp mixts. treated with 2% modified rosin, 1-2% epichlorohydrin (I) resin, 3-6% urea or melamine resin, 0-15% acrylic acid (II)-BuOAc-EtOAc-styrene mixt., and Al₂(SO₄)₃ (to pH 4.5-5) with post treatment by a mixt. of **oxidized starch** soln. and the II-BuOAc-EtOAc-styrene mixt. Adding 2% modified rosin, 1% I resin, 3% urea-HCHO resin, 4% II-BuOAc-EtOAc-styrene mixt., defoamer, and Al₂(SO₄)₃ (to pH 4.5-5) to a 30:70 hardwood-softwood pulp mixt., processing the pulp into paper, dewatering and drying at 100.degree., sizing in a press with a 1:1 mixt. of 6% aq. **oxidized starch** and II-BuOAc-EtOAc-styrene mixt., and drying at 100.degree. gave paper (105 g/m²) with lengthwise and crosswise breaking stress 13 and 7.5 dN, resp., lengthwise and crosswise break elongation 1.5 and 2.4%, resp., Gurley air permeability 80 s/100 cm³, and Cobb water absorptivity 16-24 g/m².

L89 ANSWER 52 OF 78 CAPLUS COPYRIGHT 2002 ACS
 ACCESSION NUMBER: 1986:131792 CAPLUS
 DOCUMENT NUMBER: 104:131792
 TITLE: Neutral paper
 INVENTOR(S): Katsura, Toru
 PATENT ASSIGNEE(S): Mitsubishi Paper Mills, Ltd., Japan
 SOURCE: Jpn. Kokai Tokkyo Koho, 5 pp.
 CODEN: JKXXAF
 DOCUMENT TYPE: Patent
 LANGUAGE: Japanese
 FAMILY ACC. NUM. COUNT: 1
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 60185894	A2	19850921	JP 1984-41759	19840305
JP 03068158	B4	19911025		

AB Neutral paper having excellent degree of sizing is manufd. by surface sizing with sizes comprising org. ketene dimers, starch tertiary amine derivs. (substitution degree 0.035-0.070) and aq. solns. of anionic

acrylic monomer-styrene copolymers. Thus, paper was manufd. from a mixt. of hardwood bleached kraft pulp 80, softwood bleached kraft pulp 20, Hydrocarb 60 (CaCO₃) 10, talc 10, corn starch modified with .beta.-diethylaminoethyl chloride (substitution degree 0.050) 0.50, and Hercon W (alkyl ketene dimer) 0.20 parts and sized with an aq. soln. contg. Nisshoku MS 3800 (oxidized starch) and Colopearl M 150 (anionic acrylic monomer-styrene copolymer soln.). The paper showed initial Stoechigt sizing degree 27 s and 33 s after 1 wk, compared with 0 and 0, resp., for a paper obtained similarly without Hercon W.

L89 ANSWER 53 OF 78 CAPLUS COPYRIGHT 2002 ACS
 ACCESSION NUMBER: 1985:489286 CAPLUS
 DOCUMENT NUMBER: 103:89286
 TITLE: Cross-bonded starch
 INVENTOR(S): Fitton, Michael George; Gonze, Michel
 PATENT ASSIGNEE(S): CPC International Inc., USA
 SOURCE: Eur. Pat. Appl., 10 pp.
 CODEN: EPXXDW
 DOCUMENT TYPE: Patent
 LANGUAGE: English
 FAMILY ACC. NUM. COUNT: 1
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
EP 143643	A1	19850605	EP 1984-308220	19841127
EP 143643	B1	19880113		
EP 143643	B2	19951115		
R: AT, BE, DE, FR, GB, IT, NL, SE				
FI 8404553	A	19850529	FI 1984-4553	19841120
FI 75350	B	19880229		
FI 75350	C	19880609		
AU 8435742	A1	19850606	AU 1984-35742	19841121
AU 570519	B2	19880317		
BR 8405952	A	19850910	BR 1984-5952	19841122
ES 537990	A1	19851101	ES 1984-537990	19841127
AT 31934	E	19880115	AT 1984-308220	19841127
JP 60186501	A2	19850924	JP 1984-249821	19841128
JP 05045601	B4	19930709		
PRIORITY APPLN. INFO.:		GB 1983-31712		19831128
		EP 1984-308220		19841127

AB A process for crosslinking starch (I) comprises pretreating I with H₂O₂ and then reacting the pretreated I with Ac₂O and adipic acid (II). The pretreatment of I with H₂O₂ enhanced the crosslinking effect of II. Crosslinked I is useful as thickener for food. Thus, a I slurry at 20-22 Be was treated with H₂O₂ at pH 8.0-8.5, followed by reaction with Ac₂O and II for 45-60 min at pH 8.0-8.5. The acidified and washed product had shear stability (400 rpm for 5 min) 7.0, acid stability (pH 2.5) 1.96, and heat stability (120.degree. for 30 min) 1.70 vs. 0.95, 1.0, and 1.05, resp. for crossbonded I without pretreatment with H₂O₂.

L89 ANSWER 54 OF 78 WPIDS (C) 2002 THOMSON DERWENT
 ACCESSION NUMBER: 1984-316466 [51] WPIDS
 DOC. NO. CPI: C1984-135295
 TITLE: Yarn sizing soln. - with emulsion of acrylic copolymer of sizing agent and acrylic or methacrylic acid.
 DERWENT CLASS: A14 A87 F06

PATENT ASSIGNEE(S): (GOOU) GOO CHEM IND CO LTD

COUNTRY COUNT: 1

PATENT INFORMATION:

PATENT NO	KIND	DATE	WEEK	LA	PG
JP 59199867	A	19841113	(198451)*		7

APPLICATION DETAILS:

PATENT NO	KIND	APPLICATION	DATE
JP 59199867	A	JP 1983-71007	19830421

PRIORITY APPLN. INFO: JP 1983-71007 19830421

AB JP 59199867 A UPAB: 19930925

In sizing of filament yarn, spun yarn, etc. by means of a high pressure squeezing roller, a low viscosity polymer emulsion obtained by emulsion copolymerisation of a monomer mixt. consisting of 88-50 wt.% of (meth)acrylic ester which is copolymerisable with water-soluble sizing agent and 50-12 wt.% of (meth)acrylic acid, is added to sizing soln.

The water soluble sizing agents are e.g. (partly saponified) polyvinyl alcohol, partly saponified copolymer of (meth)acrylic ester, polyacrylic acid/vinyl acetate/maleic acid copolymer, styrene/maleic acid copolymer, soluble starch, oxidised starch, esterified starch, carboxymethylcellulose and corn starch.

ADVANTAGE - Sharp increase of viscosity of sizing soln. is prevented.
0/0

L89 ANSWER 55 OF 78 WPIDS (C) 2002 THOMSON DERWENT

ACCESSION NUMBER: 1984-216200 [35] WPIDS

DOC. NO. CPI: C1984-090938

TITLE: Dye fixative for cellulose fibres - consists of PVA and/or starch and polymer obtd. from cationic unsatd. monomer.

DERWENT CLASS: A18 A87 F06

PATENT ASSIGNEE(S): (SANN) SANYO CHEM IND LTD

COUNTRY COUNT: 1

PATENT INFORMATION:

PATENT NO	KIND	DATE	WEEK	LA	PG
JP 59125986	A	19840720	(198435)*		14

APPLICATION DETAILS:

PATENT NO	KIND	APPLICATION	DATE
JP 59125986	A	JP 1982-231042	19821228

PRIORITY APPLN. INFO: JP 1982-231042 19821228

AB JP 59125986 A UPAB: 19930925

The fixative consists of (1) high molecular cpd. selected from PVA and starches and (2) polymer of cationic unsatd. monomer in the ratio of 1:99 to 50:50, pref. 10:90 to 20:80 by wt.

Component (2) is acid salt of sec. or tert. amino gp.-contg. monomer and/or quaternarised tert. amino gp.-contg. monomer. Pref. are acid salts

of sec. or tert. amino gp.-contg. (meth)acrylate and di(meth)allylamine and their mixt. The PVA has an average polymerisation degree of 300-2500 and a saponification degree of 80-100 mol.%. The starches include corn, potato, sweet potato, rice and tapioca starches and processed starches such as oxidised, cationised and etherised starches.

ADVANTAGE - The fixative improves colour fastness of cellulosic fibre dyed with direct dye and/or reactive dye.

0/0

L89 ANSWER 56 OF 78 WPIDS (C) 2002 THOMSON DERWENT
 ACCESSION NUMBER: 1984-173711 [28] WPIDS
 DOC. NO. NON-CPI: N1984-129477
 DOC. NO. CPI: C1984-073399
 TITLE: Ink jet recording paper - has back sizing effected using e.g. oxidised starch to prevent strike through phenomena.
 DERWENT CLASS: A97 F09 G05 P75
 PATENT ASSIGNEE(S): (MATU) MATSUSHITA ELEC IND CO LTD
 COUNTRY COUNT: 1
 PATENT INFORMATION:

PATENT NO	KIND	DATE	WEEK	LA	PG
JP 59095187	A	19840601	(198428)*		6

APPLICATION DETAILS:

PATENT NO	KIND	APPLICATION	DATE
JP 59095187	A	JP 1982-205164	19821122

PRIORITY APPLN. INFO: JP 1982-205164 19821122

AB JP 59095187 A UPAB: 19930925

The paper has back and surface with different sizing degrees. The paper is produced by sizing the back of (A) a recording paper which has Stoechigt sizing degree of 0-10 sec.

Pref. sizing agent is a natural polymer, e.g. oxidised starch, etc., synthetic polymers, e.g. acrylamide series, etc., synthetic sizing agent, e.g. petroleum resins, etc., esp. glue, CMC, PVA, alkyl ketene dimer, etc. The back sizing is carried out so that the treated recording paper has Stoechigt sizing degree of 3-20. The recording paper treated is single or coated paper.

ADVANTAGE - The paper has excellent ink-absorption properties and water resistance even at a high humidity without deteriorating the recording characteristics.

0/0

L89 ANSWER 57 OF 78 CAPLUS COPYRIGHT 2002 ACS
 ACCESSION NUMBER: 1984:176750 CAPLUS
 DOCUMENT NUMBER: 100:176750
 TITLE: Ink-jet printing paper
 PATENT ASSIGNEE(S): Jujo Paper Co., Ltd., Japan
 SOURCE: Jpn. Kokai Tokkyo Koho, 5 pp.
 CODEN: JKXXAF
 DOCUMENT TYPE: Patent
 LANGUAGE: Japanese
 FAMILY ACC. NUM. COUNT: 1
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 58008685	A2	19830118	JP 1981-106970	19810710
JP 63052588	B4	19881019		

AB Ink-jet printing papers are prep'd. by forming paper from pulp slurries contg. a silicic acid salt and a wet-strength agent and optionally contg. **glass fibers** and then coating the paper with a water-sol. polymer. Thus, a slurry contg. pulp 100, **glass fibers** 3, Zeolex 17S (silicic acid salt) 30, and Kymene 557 [25212-19-5] 0.5 part was passed through a papermaking machine. The formed paper was coated (4.5 g/m²) with **oxidized starch** to give an ink-jet printing paper with resistance to ink oozing.

L89 ANSWER 58 OF 78 CAPLUS COPYRIGHT 2002 ACS
 ACCESSION NUMBER: 1983:531278 CAPLUS
 DOCUMENT NUMBER: 99:131278
 TITLE: Photographic paper support
 INVENTOR(S): Kemme, Gregor
 PATENT ASSIGNEE(S): Schoeller, Felix, Jr., G.m.b.H. und Co. K.-G., Fed. Rep. Ger.
 SOURCE: Ger. Offen., 18 pp.
 CODEN: GWXXBX
 DOCUMENT TYPE: Patent
 LANGUAGE: German
 FAMILY ACC. NUM. COUNT: 1
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
DE 3145793	A1	19830526	DE 1981-3145793	19811119
DE 3145793	C2	19860424		
GB 2134939	A1	19840822	GB 1983-3157	19830204
GB 2134939	B2	19860102		
FR 2540643	A1	19840810	FR 1983-1957	19830208
FR 2540643	B1	19890804		
US 4504576	A	19850312	US 1983-466584	19830215

PRIORITY APPLN. INFO.: DE 1981-3145793 19811119

AB Fog formation in water-resistant photog. papers using a paper support which has neutral internal sizing can be decreased by addn. to the sizing compn. of a polycarboxylic acid whose acid groups are sepd. from one another by 3 C atoms at most and/or a hydroxy acid capable of inner complex formation. The acid may also be in the form of an amide or an ammonium salt. Thus, a paper treated with an **alkyl ketene dimer** 0.3 and a polyaminoamide epichlorohydrin resin 1.5 wt.% was sized on both sides with an aq. soln. contg. **oxidized starch** 6, NaCl 2, an optical brightener 0.2, citric acid 5, and water 86.8 wt.%. The resultant support was then coated with a nonstabilized gelatin-AgBr emulsion, stored 4 days at 56.degree., and then developed to show a fog of 0.08 vs. 0.35 for a control contg. no citric acid.

L89 ANSWER 59 OF 78 CAPLUS COPYRIGHT 2002 ACS
 ACCESSION NUMBER: 1983:518234 CAPLUS
 DOCUMENT NUMBER: 99:118234
 TITLE: Rapid enzymic determination of glucoamylase
 AUTHOR(S): Wang, Bofei
 CORPORATE SOURCE: Shanghai Univ. Sci. Technol., Shanghai, Peop. Rep. China
 SOURCE: Huaxue Shijie (1983), 24(2), 42-4

CODEN: HUAKAB; ISSN: 0367-6358

DOCUMENT TYPE: Journal
LANGUAGE: Chinese

AB The activity of glucoamylase (I) was detd. by a rapid enzymic method in a reaction mixt. contg. sol. starch, glucose oxidase, peroxidase, and o-dianisidine (II). The glucose released from the sol. starch by I was oxidized to produce gluconic acid and H₂O₂, and I activity was detd. by measuring the absorption at 460 nm of oxidized II formed from H₂O₂ and II in the presence of peroxidase. A typical reaction mixt. contained 0.1M acetate buffer (pH 5.5), 0.25% sol. starch, 30 units glucose oxidase, 50 units peroxidase, and 0.5 unit I; the final vol. was 4 mL with incubation temp. and time of 40.degree. and 3 min, resp. The enzymic method was rapid, simple, and specific for monitoring I activity in fermn., food, and other I-assocd. industries.

L89 ANSWER 60 OF 78 CAPLUS COPYRIGHT 2002 ACS

ACCESSION NUMBER: 1982:440605 CAPLUS
 DOCUMENT NUMBER: 97:40605
 TITLE: Coating compositions for paper
 PATENT ASSIGNEE(S): Oji Paper Co., Ltd., Japan
 SOURCE: Jpn. Kokai Tokkyo Koho, 6 pp.
 CODEN: JKXXAF
 DOCUMENT TYPE: Patent
 LANGUAGE: Japanese
 FAMILY ACC. NUM. COUNT: 1
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 57025499	A2	19820210	JP 1980-99395	19800722

AB Sand mills are used to disperse pigments and starch derivs. in the prepn. of coating compns. for paper. Thus, no. 1 kaolin 25, no. 2 kaolin 50, heavy CaCO₃ 13, TiO₂ 2, Al(OH)₃ 10, oxidized starch 5, and poly(Na acrylate) 0.3 parts were dispersed in water with a propeller mixer and the pH of 67% solids dispersion was adjusted to 9 with NaOH. The dispersion was processed in a sand mill heated with water at .apprx.90.degree. and requiring 0.7 kW power to drive the motor, mixed (105 parts solids) with 10 parts JSR 0692, dild. with water to solids content 64%, and used to coat paper. A similar dispersion having solids concn. 67% and contg. no oxidized starch required >3 kW to drive the motor.

L89 ANSWER 61 OF 78 CAPLUS COPYRIGHT 2002 ACS

ACCESSION NUMBER: 1982:617994 CAPLUS
 DOCUMENT NUMBER: 97:217994
 TITLE: Dry blend sizing composition
 INVENTOR(S): Smid, Josef; Prochazka, Stanislav; Grasseova, Hedvika; Ulmer, Karel; Neubauerova, Marie
 PATENT ASSIGNEE(S): Czech.
 SOURCE: Czech., 5 pp.
 CODEN: CZXXA9
 DOCUMENT TYPE: Patent
 LANGUAGE: Czech
 FAMILY ACC. NUM. COUNT: 1
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
CS 196564	B	19800331	CS 1975-5944	19750902

AB Stable sizes suitable for high-speed weaving processes comprise modified starch and cellulose derivs. and water-sol. polyacrylates. Thus, a powd. mixt. of 80 parts oxidized potato starch and 10 parts CM cellulose [9004-32-4] was gradually treated with 40 parts of an aq. 25% soln. of a polyacrylate resin which caused aggregation and partial swelling of the starch particles but permitted retention of the powd. consistency. The product was dried at 100-20.degree. and used for mixed polyester fibers.

L89 ANSWER 62 OF 78 CAPLUS COPYRIGHT 2002 ACS

ACCESSION NUMBER: 1981:408751 CAPLUS
 DOCUMENT NUMBER: 95:8751
 TITLE: Sizing agents for polyester fibers
 PATENT ASSIGNEE(S): Nichiden Kagaku Co., Ltd., Japan
 SOURCE: Jpn. Kokai Tokkyo Koho, 4 pp.
 CODEN: JKXXAF
 DOCUMENT TYPE: Patent
 LANGUAGE: Japanese
 FAMILY ACC. NUM. COUNT: 1
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 56020680	A2	19810226	JP 1979-92793	19790720

AB Monoesters of a polyvalent fatty acid anhydride with oxidized starch grafted with a hydroxyalkyl (meth) acrylate are useful as sizing agents for polyester yarns. Thus, 3 kg aq. 15% oxidized starch was grafted with 300 mL hydroxypropyl methacrylate and the resulting polymer with graft wt. increase 4.2% was esterified with 20 g maleic anhydride to give a modified starch (I). Yarn-to-size adhesion was good in coating polyester yarns with a compn. contg. 10% I, whereas this adhesion was poor for yarns sized with poly(vinyl alc.).

L89 ANSWER 63 OF 78 CAPLUS COPYRIGHT 2002 ACS

ACCESSION NUMBER: 1981:200786 CAPLUS
 DOCUMENT NUMBER: 94:200786
 TITLE: Photographic paper
 INVENTOR(S): Katsura, Toru; Kubota, Massashi
 PATENT ASSIGNEE(S): Mitsubishi Paper Mills, Ltd., Japan
 SOURCE: Ger. Offen., 22 pp.
 CODEN: GWXXBX
 DOCUMENT TYPE: Patent
 LANGUAGE: German
 FAMILY ACC. NUM. COUNT: 1
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
DE 3035318	A1	19810409	DE 1980-3035318	19800918
DE 3035318	C2	19901213		
JP 56043637	A2	19810422	JP 1979-120489	19790919
JP 58043730	B4	19830928		
GB 2058866	A	19810415	GB 1980-29004	19800908
GB 2058866	B2	19830202		
US 4482628	A	19841113	US 1980-186450	19800912

PRIORITY APPLN. INFO.:

AB Most sizing agents or other chem. additives, particularly of the cationic type, such as polyacrylamides, epoxidized polyamines, and polyethyleneimine, in paper decomp., resulting in adverse effects on the

Ag halide emulsion coatings. These effects can be minimized by the addn. of 0.1-1.0% of an oxide or slightly acid salt (carbonate, silicate, oxalate) of Mg, Ca, or Zn. Thus, 1:1 bleached hard-soft wood pulp mixt. 450 mL was mixed with Mg silicate 0.5, **oxidized starch** 2.0, and **alkyl ketene dimer** 0.6, and a polyamine-polyamide epichlorohydrin resin 0.8%. Sheets of 160 g/m² paper were made with a TAPPI machine and kept on a cylindrical drier at 105.degree. for 10 min. After storage in contact with a color photog. paper at 50.degree. and 65% relative humidity for 10 days, development of the color paper produced a fog d. of 0.27 vs. 0.68 for the Mg silicate-free pulp.

L89 ANSWER 64 OF 78 CAPLUS COPYRIGHT 2002 ACS

ACCESSION NUMBER: 1981:517015 CAPLUS
 DOCUMENT NUMBER: 95:117015
 TITLE: Sizing composition based upon **modified**
 natural and synthetic macromolecular materials
 INVENTOR(S): Smid, Josef; Jelinek, Milan; Ulmer, Karel; Hudecek,
 Zdenek
 PATENT ASSIGNEE(S): Czech.
 SOURCE: Czech., 4 pp.
 CODEN: CZXXA9
 DOCUMENT TYPE: Patent
 LANGUAGE: Czech
 FAMILY ACC. NUM. COUNT: 1
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
CS 186653	M	19781229	CS 1975-5804	19750826

AB Addn. of cellulose **derivs.** increased the stability of macromol. systems present in sizes described in Czech. 179,556. For example, a mixt. of **oxidized** potato starch Special 67.8, Lovosa TS-20 (CM-cellulose) [9004-32-4] 15.2, and **modified** polyacrolein 5.1 parts was homogenized, treated with 47.6 parts of a 25% aq. soln. of Sokrat 54 [62629-02-1] (a polyacrylate multipolymer), and dried at 120.degree. to give a size for mixed cotton-polyester warps.

L89 ANSWER 65 OF 78 WPIDS (C) 2002 THOMSON DERWENT

ACCESSION NUMBER: 1981-22394D [13] WPIDS
 TITLE: Mfr. of starch esterified by acetoacetic acid - which may be crosslinked to provide waterproofing activity or improve adhesion performance.
 DERWENT CLASS: A11 D17
 PATENT ASSIGNEE(S): (NISY) NIPPON SYNTHETIC CHEM IND CO
 COUNTRY COUNT: 1
 PATENT INFORMATION:

PATENT NO	KIND	DATE	WEEK	LA	PG
JP 56011902	A	19810205	(198113)*		

PRIORITY APPLN. INFO: JP 1979-87866 19790710

AB JP 56011902 A UPAB: 19930915
 Starch or its deriv. (e.g. corn starch, tapioca, wheat flour, potato starch, product prep'd. by heating an acidic emulsion of starch at a temp. of less than gelation temp., **oxidised starch**, dialdehyde starch and

dextrin) is stirred or fluidised and reacted with a diketene opt. in the presence of a solvent or non-solvent (e.g. those inert to the diketene and which is a non-solvent to the starch and esterified starch, e.g. acetone, methylethyl ketone, hexane, heptane, benzene and toluene,) e.g. by absorbing or occluding the solvent into the starch and then spraying the liq. ketene at 20-120 deg.C onto the moistened starch in an inert atmos. or contacting the gaseous diketene with the starch at 30-250 deg.C or by spraying a mixt. of the liquid diketene and solvent or non-solvent onto the starch in the presence of a esterifying catalyst (e.g. Na or K acetate, prim. sec. or tert amine) (0.01-20 wt.%).

The esterified starch may be used in the same manner as starch. It is crosslinked with an aldehyde or polyvalent metallic cpd. to provide water proofing activity or improve the adhesion performance.

L89 ANSWER 66 OF 78 CAPLUS COPYRIGHT 2002 ACS
 ACCESSION NUMBER: 1981:210164 CAPLUS
 DOCUMENT NUMBER: 94:210164
 TITLE: Modified starch coatings for glass fibers
 AUTHOR(S): Boruch, M.; Pokorski, Z.; Wedzonka, S.
 CORPORATE SOURCE: Polytech. Lodz, Lodz, Pol.
 SOURCE: Chemiefasern/Text.-Ind. (1981), 31(2), 139-40
 CODEN: CFTXAJ; ISSN: 0340-3343
 DOCUMENT TYPE: Journal
 LANGUAGE: German
 AB Evaluation of 4 modified starch sizes, i.e., Polotex [52337-05-0] lightly oxidized starch, Esamyl (starch acetate) [9045-28-7], Polyamyl (carboxymethyl starch) [9057-06-1], and Sulinex [60938-03-6] strongly oxidized starch, showed a Polyamyl-Sulinex mixt. was the most effective in protecting glass fibers against the adverse effect of abrasion during processing.

L89 ANSWER 67 OF 78 WPIDS (C) 2002 THOMSON DERWENT
 ACCESSION NUMBER: 1980-69977C [40] WPIDS
 TITLE: Glyoxylic acid and/or deriv. addn. to starch-contg. food - to reduce ageing during agglutination.
 DERWENT CLASS: D13 E17
 PATENT ASSIGNEE(S): (KLIN-I) KLINGLER R
 COUNTRY COUNT: 1
 PATENT INFORMATION:

PATENT NO	KIND	DATE	WEEK	LA	PG
DE 2911475	A	19800925	(198040)*		

PRIORITY APPLN. INFO: DE 1979-2911475 19790321
 AB DE 2911475 A UPAB: 19930902
 In the prepn. of natural and glutinised starch-contg. foods and other prods., glyoxylic acid and/or its salts and derivs. with other additives is/are added, before or during glutinisation, in sufficient quantity to reduce ageing.
 Foods or prods. can contain plant starch, starch fractions, swelling-, converted-, acid-modified- and oxidised starch or other starch derivs. Prod. freshness and quality is maintained. Prods. are stabilised e.g. w.r.t. hot- and cold-viscosity.

L89 ANSWER 68 OF 78 CAPLUS COPYRIGHT 2002 ACS

ACCESSION NUMBER: 1979:7924 CAPLUS
 DOCUMENT NUMBER: 90:7924
 TITLE: Coating compositions for paper
 INVENTOR(S): Suzuki, Kazuhiko; Fujiki, Yasuhiro; Takada, Akio
 PATENT ASSIGNEE(S): Kazaki Paper Mfg. Co., Ltd., Japan
 SOURCE: Jpn. Kokai Tokkyo Koho, 10 pp.
 CODEN: JKXXAF
 DOCUMENT TYPE: Patent
 LANGUAGE: Japanese
 FAMILY ACC. NUM. COUNT: 1
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 53081709	A2	19780719	JP 1976-158004	19761227
JP 55011799	B4	19800327		

AB Heavy CaCO₃ dispersions giving defect-free coatings on paper are prep'd. by sand-milling under specified conditions of surface area increase. Thus, a 60% aq. dispersion contg. 100 parts heavy CaCO₃ (surface area 1 m²/g) and 0.3 part poly(Na acrylate) was sand-ground to surface area 1.9 m²/g, mixed (40 parts solids) with 60 parts kaolin, dispersed in water to 65%, mixed with 7 parts oxidized starch and 10 parts modified butadiene-styrene copolymer latex, dild. to solids content 55%, and coated on paper.

L89 ANSWER 69 OF 78 CAPLUS COPYRIGHT 2002 ACS
 ACCESSION NUMBER: 1976:479987 CAPLUS
 DOCUMENT NUMBER: 85:79987
 TITLE: Shear-stable cationic aqueous copolymer dispersions
 INVENTOR(S): Reichel, Fritz; Taubitz, Christof
 PATENT ASSIGNEE(S): BASF A.-G., Ger.
 SOURCE: Ger. Offen., 15 pp.
 CODEN: GWXXBX
 DOCUMENT TYPE: Patent
 LANGUAGE: German
 FAMILY ACC. NUM. COUNT: 1
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
DE 2454397	A1	19760526	DE 1974-2454397	19741116
DE 2454397	C2	19830127		

AB Copolymers prep'd. from 70-90% styrene, C1-8 alkyl (meth)acrylate, and optionally acrylonitrile with 10-30% monoethylenically unsatd. monomers having tertiary, protonated tertiary, or quaternary nitrogen atoms and having K value 20-60 are used as cationic dispersants or emulsifying agents in the polymn. of (a) C1-8 alkyl acrylates and (or) butadiene, (b) styrene and (or) acrylonitrile and (or) Me methacrylate, and (c) 0-10% (on total monomers) C3-5 .alpha.,.beta.-monoethylenically unsatd. C3-5 mono- and (or) dicarboxylic acids or their water-sol. salts or N-methylol or N-alkoxymethyl derivs. of their amides, for use as paper sizes. Thus, a mixt. of iso-PrOH 85, styrene 220, N,N-diethylaminoethyl acrylate 47.5, and 50% isopropanolic tert-Bu perpivalate 15 parts were heated 7 hr at 85.degree., mixed with 20 parts HCO₂H, and dild. with 1070 parts water, giving a copolymer [56124-44-8] with K value 47. A mixt. of this soln. 659, water 193, and trimethylstearylammmonium chloride 15 parts was heated to 85.degree., mixed with 3 parts 50% aq. H₂O₂, mixed with Bu acrylate 95, acrylonitrile 144, and 50% aq. H₂O₂ 12 parts over 3 hr, and heated 2 hr at 85.degree., giving a fine dispersion

with excellent shear stability. A bleached sulfite pulp test paper was sized with this dispersion, dild. to 0.6% solids and addnl. mixed with 6% **oxidized potato starch**, giving sizing uptake 80% and Cobb value 18 g/m².

L89 ANSWER 70 OF 78 CAPLUS COPYRIGHT 2002 ACS
 ACCESSION NUMBER: 1976:76055 CAPLUS
 DOCUMENT NUMBER: 84:76055
 TITLE: Satin white for paper coating materials
 INVENTOR(S): Oda, Katsuhiko; Kamioka, Tadashi; Takada, Akira
 PATENT ASSIGNEE(S): Kanzaki Paper Mfg. Co., Ltd., Japan
 SOURCE: Japan. Kokai, 4 pp.
 CODEN: JKXXAF
 DOCUMENT TYPE: Patent
 LANGUAGE: Japanese
 FAMILY ACC. NUM. COUNT: 1
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 50128725	A2	19751011	JP 1974-36339	19740330

AB Dispersions of satin white (I) [12344-48-8] are sand-milled to give pigments for paper coatings. Thus, a compn. of 25% solids I dispersion 80, poly(Na acrylate) 0.6, and Na tartarate 1 part was sand-milled (1 pass) to give pigment. A 50% solids dispersion of the product passed completely through a 325-mesh screen without shaking, compared with 11% passing for the untreated I. The sand-milled dispersion was compounded with kaolin 80, **oxidized starch** 7, and SBR latex 7 parts and applied to 60 g/m² paper with a blade coater to 6 g/m² without forming streaks.

L89 ANSWER 71 OF 78 CAPLUS COPYRIGHT 2002 ACS
 ACCESSION NUMBER: 1974:523349 CAPLUS
 DOCUMENT NUMBER: 81:123349
 TITLE: Binding and stabilizing agents from starch
 INVENTOR(S): Kodet, Josef; Jelinek, Petr
 SOURCE: Czech., 2 pp.
 CODEN: CZXXA9
 DOCUMENT TYPE: Patent
 LANGUAGE: Czech
 FAMILY ACC. NUM. COUNT: 1
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
CS 152836	B	19740222	CS 1970-8798	19701227

AB Binding agents for food were prep'd. from starch [9005-25-8] degraded partly with H₂SO₄ or from **oxidized starch**. Sucrose or glucose was added to the starch compn. The starch compn. had improved soly. and its viscosity could be regulated. H₂O₂ was used in oxidn. of starch.

L89 ANSWER 72 OF 78 CAPLUS COPYRIGHT 2002 ACS
 ACCESSION NUMBER: 1974:523343 CAPLUS
 DOCUMENT NUMBER: 81:123343
 TITLE: Modified starch for electrophoresis
 INVENTOR(S): Smid, Josef; Hejtmanek, Vladimir
 SOURCE: Czech., 2 pp.
 CODEN: CZXXA9
 DOCUMENT TYPE: Patent

LANGUAGE: Czech

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
CS 152160	B	19731219	CS 1971-6343	19710906
AB Difficulties encountered in the Smithie method for prepn. of modified potato starch [9005-25-8], suitable for electrophoresis involving treatment with HCl in Me ₂ CO, e.g. flammability and toxicity, were avoided and the resultant product improved by treatment of the starch with HCl and H ₂ O ₂ under specific conditions. Thus, treatment of 500 kg potato starch with 0.75 kg 37% HCl and 1 kg 30% H ₂ O ₂ by mixing in 5 l. water, heating 1 hr to 50.deg., 1 hr to 70.deg., 1 hr to 80.deg., holding 3-4 hr at 80.deg., neutralizing with soda ash, cooling, and filtering, gave a product slightly sol. in cold water, with alk. fluidity 40-45.				

L89 ANSWER 73 OF 78 CAPLUS COPYRIGHT 2002 ACS

ACCESSION NUMBER: 1972:98242 CAPLUS

DOCUMENT NUMBER: 76:98242

TITLE: Coatings for food products

INVENTOR(S): Smid, Josef; Kubicek, Alois; Sobotka, Rudolf

SOURCE: Czech., 2 pp.

CODEN: CZXXA9

DOCUMENT TYPE: Patent

LANGUAGE: Czech

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
CS 139686		19710115	CS 1968-5715	19680807
AB Oxidized starch produces, in combination with dyes and flavoring additives, protective coatings which prevent drying out of foods and improve their appearance. Thus, corn or wheat starch is made acid with 0.1-0.3% HCl, treated with 0.1-0.5% H ₂ O ₂ , and heated to 90.degree. to give a product which has a viscosity of 15 sec in a 20% aq. soln. It is applied in a 35% soln. at 80.degree. on foods and decreases drying out by 0.5-0.7%.				

L89 ANSWER 74 OF 78 CAPLUS COPYRIGHT 2002 ACS

ACCESSION NUMBER: 1970:22757 CAPLUS

DOCUMENT NUMBER: 72:22757

TITLE: Pigmented coatings for paper

INVENTOR(S): Brailsford, Sidney F.; McDonald, Donald R.

PATENT ASSIGNEE(S): Reed Paper Group Ltd.

SOURCE: Ger. Offen., 8 pp.

CODEN: GWXXBX

DOCUMENT TYPE: Patent

LANGUAGE: German

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
DE 1908923	A	19690918	DE 1969-1908923	19690214
GB 1227861	A	19710407	GB 1968-7818	19680216
US 3928055	A	19751223	US 1971-175008	19710825
PRIORITY APPLN. INFO.:			GB 1968-7818	19680216

US 1969-801245 19690219

AB Paper coatings were prepd. from aq. suspensions of pigments, binder, and cooked starch. Thus, a suspension was prepd. from a Na polyacrylate (Dispex disperser) 0.12, clay (Lemstar B) (I) 60, oxidized cornstarch 36, and water 40 par ts. This mixt. was then ground using 20-30 mesh sand (Ottawa-Sand) as grinding material, and heated 24-6 min at 95.degree.. The cooked starch mixt. was combined with styrene-butadiene copolymer latex (Uniroyal 2752) and coated onto a base paper at 80 g/m². A comparison coating contg. English china Clay (Dinkie A) (II) was also prepd. (clay used, g/m² coating, 45.degree. reflection, and ml/min Bendtsen gloss given): I, 17.5, 143.5, 17; I, 16.2, 135.5, 20; I, 13.4, 125.7, 21; I, 10.8, 128.2, 20; II, 20, 167.5, 15; II, 16, 152, 19; II, 14.5, 142, 21; II, 12.5, 127, 32. Poly(vinyl alc.), hydroxyethylated cornstarch, crude, oxidized or hydroxyethylated potato starch, washed chalk, and TiO₂ were also claimed for use. This process uses lower quality clays in prep. paper coatings with satisfactory luster. The compns. had good smoothness and body and were useful in the prepn. of lightwt. coated papers.

L89 ANSWER 75 OF 78 CAPLUS COPYRIGHT 2002 ACS

ACCESSION NUMBER: 1953:14014 CAPLUS

DOCUMENT NUMBER: 47:14014

ORIGINAL REFERENCE NO.: 47:2452e-f

TITLE: Coated abrasive article

INVENTOR(S): Nestor, Leonard R.

PATENT ASSIGNEE(S): Minnesota Mining & Manufg. Co.

DOCUMENT TYPE: Patent

LANGUAGE: Unavailable

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 2609284		19520902	US	

AB Coated abrasive articles, such as sandpaper, are prepd. by using as a grit binder, adhesive compns. made by oxidizing raw starch or similar materials to a predetd. end point and converting the oxidized starch to a viscous fluid by the addn. of an active base. The oxidation is carried out at 80-125.degree.F. with dil. solns. of NaOCl or KMnO₄ as oxidizing agents. NaOH is effective in rapidly converting the mixt. of treated starch and water to the viscous adhesive state. The modified starch adhesive may be filled or compounded with powd. CaCO₃ or other inert fillers.

L89 ANSWER 76 OF 78 WPIDS (C) 2002 THOMSON DERWENT

ACCESSION NUMBER: 1973-36174U [25] WPIDS

TITLE: Powdery sugar contg oxides of starch sugars prodn - for use in instant foods.

DERWENT CLASS: D13 D17

PATENT ASSIGNEE(S): (HAYB) HAYASHIBARA CO

COUNTRY COUNT: 1

PATENT INFORMATION:

PATENT NO	KIND	DATE	WEEK	LA	PG
JP 48020314	B		(197325)*		

PRIORITY APPLN. INFO: JP 1969-95842 19691129

AB JP 73020314 B UPAB: 19930831

Method for producing powdery sugar contg. maltobionic acid as the oxides of starch sugars, comprises **oxidizing starch** sugars contg. maltose by fermentation, adding org. acid or sweetners such as sugar and acid converted sugar to the obtd. mixt. of sugars and their oxides, and drying the mixt. The powdery sugar is useful as an additive for the prodn. of instant food such as instant beverages. Starch sugar contg. maltose is obtd. by hydrolyzing a starch such as corn starch, potato starch or amylose starch by the enzyme, consisting of beta-amylase and -1.6-glucosidase. 1.6-Glucosidase is produced by cultivating Pseudomonas amyloferamosa (ATCC 21262) in a culture medium.

L89 ANSWER 77 OF 78 WPIDS (C) 2002 THOMSON DERWENT

ACCESSION NUMBER: 1972-64614T [40] WPIDS

TITLE: Dehydrating wines - product used as an **additive** for the prodn of medicaments, **foods**, candies etc.

DERWENT CLASS: D16

PATENT ASSIGNEE(S): (SATO-N) SATO SHOKUHIN KOGYO KK

COUNTRY COUNT: 1

PATENT INFORMATION:

PATENT NO	KIND	DATE	WEEK	LA	PG
JP 47039355	B		(197240)*		

PRIORITY APPLN. INFO: JP 1968-65061 19680910

AB JP 72039355 B UPAB: 19930831

Wine is dehydrated by adding to a wine an aq. soln. of at least a water-soluble processed starch selected from the gp. consisting of (1) dextrin denatured with an enzyme, (2) dextrin hydrolysed with an acid and (3) a paste of an **oxidised starch**, the total amt. of the water-soluble processed starch(es) and solid material in wine relative to water, being is not 70% and then subjecting the obtd. mixt. to spray drying at as low a temperature as possible to remove water.

L89 ANSWER 78 OF 78 WPIDS (C) 2002 THOMSON DERWENT

ACCESSION NUMBER: 1970-90177R [48] WPIDS

TITLE: Starch syrups contg large amts of organic - acids useful as **food additives**.

DERWENT CLASS: D13 D16 D17

PATENT ASSIGNEE(S): (HAYB) HAYASHIBARA CO

COUNTRY COUNT: 10

PATENT INFORMATION:

PATENT NO	KIND	DATE	WEEK	LA	PG
BE 751525	A		(197048)*		
NL 7008095	A		(197049)		
DE 2028134	A		(197108)		
ZA 7003745	A		(197113)		
FR 2049969	A		(197125)		
CH 525252	A		(197237)		
GB 1320165	A		(197324)		
CA 951666	A	19740723	(197432)		
US 3862005	A	19750121	(197505)		

DE 2028134 B 19780112 (197803)
JP 55033862 B 19800903 (198039)

PRIORITY APPLN. INFO: JP 1969-39005 19690520; JP 1969-44370
19690606

AB BE 751525 A UPAB: 19930831

The mixture of products consisting of oligosaccharides, dextrans and the organic acids, is obtained by subjecting a starch hydrolysate, to the oxidising action of a glucose-deshydrogenase itself obtained by the action of an acid and/or an enzyme. Thus, a micro-organism producing a glucose-deshydrogenase, e.g. Pseudomonas graveolens IFO 3460, may be cultivated on a starch hydrolysate as substrate, or a starch hydrolysate may be subjected to the oxidising action of these micro-organism cells which have been grown separately.

The starch syrups comprise mainly maltobionic and maltotriionic acids when using a starch hydrolysate contg. more than 50% maltose as starting material.

=> file hcplus
FILE 'HCAPLUS' ENTERED AT 16:24:46 ON 12 JUN 2002
USE IS SUBJECT TO THE TERMS OF YOUR STN CUSTOMER AGREEMENT.
PLEASE SEE "HELP USAGETERMS" FOR DETAILS.
COPYRIGHT (C) 2002 AMERICAN CHEMICAL SOCIETY (ACS)

Copyright of the articles to which records in this database refer is held by the publishers listed in the PUBLISHER (PB) field (available for records published or updated in Chemical Abstracts after December 26, 1996), unless otherwise indicated in the original publications. The CA Lexicon is the copyrighted intellectual property of the American Chemical Society and is provided to assist you in searching databases on STN. Any dissemination, distribution, copying, or storing of this information, without the prior written consent of CAS, is strictly prohibited.

Point of Contact:
Thomas G. Larson, Ph.D.
703-308-7309
CM1, Rm. 6B 01

FILE COVERS 1907 - 12 Jun 2002 VOL 136 ISS 24
FILE LAST UPDATED: 11 Jun 2002 (20020611/ED)

This file contains CAS Registry Numbers for easy and accurate substance identification.

CAS roles have been modified effective December 16, 2001. Please check your SDI profiles to see if they need to be revised. For information on CAS roles, enter HELP ROLES at an arrow prompt or use the CAS Roles thesaurus (/RL field) in this file.

=> D QUE L19

L1	62192 SEA FILE=HCAPLUS ABB=ON	PLU=ON	HYDROGEN PEROXIDE/CT
L2	1 SEA FILE=REGISTRY ABB=ON	PLU=ON	HYDROGEN PEROXIDE/CN
L3	62192 SEA FILE=HCAPLUS ABB=ON	PLU=ON	L2
L4	62192 SEA FILE=HCAPLUS ABB=ON	PLU=ON	L1 OR L3
L6	1 SEA FILE=REGISTRY ABB=ON	PLU=ON	"COPPER(2+)" /CN
L7	8224 SEA FILE=HCAPLUS ABB=ON	PLU=ON	L6
L8	359495 SEA FILE=HCAPLUS ABB=ON	PLU=ON	COPPER+NT, PFT/CT
L9	17694 SEA FILE=HCAPLUS ABB=ON	PLU=ON	L8 (L) (ION OR (II) OR "2+" OR DIVALENT)
L11	50797 SEA FILE=HCAPLUS ABB=ON	PLU=ON	STARCH+NT, PFT/CT
L12	1 SEA FILE=REGISTRY ABB=ON	PLU=ON	STARCH/CN
L13	49612 SEA FILE=HCAPLUS ABB=ON	PLU=ON	L12
L14	50797 SEA FILE=HCAPLUS ABB=ON	PLU=ON	L11 OR L13
L15	3552 SEA FILE=HCAPLUS ABB=ON	PLU=ON	L14 (L) (PREP OR RACT) /RL
L16	213 SEA FILE=HCAPLUS ABB=ON	PLU=ON	L15 (L) OXIDI?
L17	30 SEA FILE=HCAPLUS ABB=ON	PLU=ON	L16 AND L4
L18	25614 SEA FILE=HCAPLUS ABB=ON	PLU=ON	L9 OR L7
L19	1 SEA FILE=HCAPLUS ABB=ON	PLU=ON	L17 AND L18

=> D QUE L22

L1	62192 SEA FILE=HCAPLUS ABB=ON	PLU=ON	HYDROGEN PEROXIDE/CT
L2	1 SEA FILE=REGISTRY ABB=ON	PLU=ON	HYDROGEN PEROXIDE/CN
L3	62192 SEA FILE=HCAPLUS ABB=ON	PLU=ON	L2
L4	62192 SEA FILE=HCAPLUS ABB=ON	PLU=ON	L1 OR L3
L6	1 SEA FILE=REGISTRY ABB=ON	PLU=ON	"COPPER(2+)" /CN
L7	8224 SEA FILE=HCAPLUS ABB=ON	PLU=ON	L6
L8	359495 SEA FILE=HCAPLUS ABB=ON	PLU=ON	COPPER+NT, PFT/CT
L9	17694 SEA FILE=HCAPLUS ABB=ON	PLU=ON	L8 (L) (ION OR (II) OR "2+" OR DIVALENT)
L10	69238 SEA FILE=HCAPLUS ABB=ON	PLU=ON	OXIDATION CATALYSTS+NT, PFT/CT

L11 50797 SEA FILE=HCAPLUS ABB=ON PLU=ON STARCH+NT, PFT/CT
 L12 1 SEA FILE=REGISTRY ABB=ON PLU=ON STARCH/CN
 L13 49612 SEA FILE=HCAPLUS ABB=ON PLU=ON L12
 L14 50797 SEA FILE=HCAPLUS ABB=ON PLU=ON L11 OR L13
 L18 25614 SEA FILE=HCAPLUS ABB=ON PLU=ON L9 OR L7
 L20 347 SEA FILE=HCAPLUS ABB=ON PLU=ON L14 AND L4
 L21 8 SEA FILE=HCAPLUS ABB=ON PLU=ON L20 AND L18
 L22 2 SEA FILE=HCAPLUS ABB=ON PLU=ON L21 AND L10

=> D QUE L27

L1 62192 SEA FILE=HCAPLUS ABB=ON PLU=ON HYDROGEN PEROXIDE/CT
 L2 1 SEA FILE=REGISTRY ABB=ON PLU=ON HYDROGEN PEROXIDE/CN
 L3 62192 SEA FILE=HCAPLUS ABB=ON PLU=ON L2
 L4 62192 SEA FILE=HCAPLUS ABB=ON PLU=ON L1 OR L3
 L6 1 SEA FILE=REGISTRY ABB=ON PLU=ON "COPPER (2+)" /CN
 L7 8224 SEA FILE=HCAPLUS ABB=ON PLU=ON L6
 L8 359495 SEA FILE=HCAPLUS ABB=ON PLU=ON COPPER+NT, PFT/CT
 L9 17694 SEA FILE=HCAPLUS ABB=ON PLU=ON L8 (L) (ION OR (II) OR "2+"
 OR DIVALENT)
 L11 50797 SEA FILE=HCAPLUS ABB=ON PLU=ON STARCH+NT, PFT/CT
 L12 1 SEA FILE=REGISTRY ABB=ON PLU=ON STARCH/CN
 L13 49612 SEA FILE=HCAPLUS ABB=ON PLU=ON L12
 L14 50797 SEA FILE=HCAPLUS ABB=ON PLU=ON L11 OR L13
 L18 25614 SEA FILE=HCAPLUS ABB=ON PLU=ON L9 OR L7
 L23 1212 SEA FILE=HCAPLUS ABB=ON PLU=ON L18 (L) CAT/RL
 L25 4561 SEA FILE=HCAPLUS ABB=ON PLU=ON L4 (L) RACT/RL
 L26 38 SEA FILE=HCAPLUS ABB=ON PLU=ON L14 AND L25
 L27 1 SEA FILE=HCAPLUS ABB=ON PLU=ON L26 AND L23

=> D QUE L28

L1 62192 SEA FILE=HCAPLUS ABB=ON PLU=ON HYDROGEN PEROXIDE/CT
 L2 1 SEA FILE=REGISTRY ABB=ON PLU=ON HYDROGEN PEROXIDE/CN
 L3 62192 SEA FILE=HCAPLUS ABB=ON PLU=ON L2
 L4 62192 SEA FILE=HCAPLUS ABB=ON PLU=ON L1 OR L3
 L6 1 SEA FILE=REGISTRY ABB=ON PLU=ON "COPPER (2+)" /CN
 L7 8224 SEA FILE=HCAPLUS ABB=ON PLU=ON L6
 L8 359495 SEA FILE=HCAPLUS ABB=ON PLU=ON COPPER+NT, PFT/CT
 L9 17694 SEA FILE=HCAPLUS ABB=ON PLU=ON L8 (L) (ION OR (II) OR "2+"
 OR DIVALENT)
 L11 50797 SEA FILE=HCAPLUS ABB=ON PLU=ON STARCH+NT, PFT/CT
 L12 1 SEA FILE=REGISTRY ABB=ON PLU=ON STARCH/CN
 L13 49612 SEA FILE=HCAPLUS ABB=ON PLU=ON L12
 L14 50797 SEA FILE=HCAPLUS ABB=ON PLU=ON L11 OR L13
 L18 25614 SEA FILE=HCAPLUS ABB=ON PLU=ON L9 OR L7
 L20 347 SEA FILE=HCAPLUS ABB=ON PLU=ON L14 AND L4
 L21 8 SEA FILE=HCAPLUS ABB=ON PLU=ON L20 AND L18
 L28 5 SEA FILE=HCAPLUS ABB=ON PLU=ON L21 NOT (SOY SAUCE OR
 "CURRENT (RIBES)" OR "FLOURS AND MEALS") /CT

=> D QUE L40

L1 62192 SEA FILE=HCAPLUS ABB=ON PLU=ON HYDROGEN PEROXIDE/CT
 L2 1 SEA FILE=REGISTRY ABB=ON PLU=ON HYDROGEN PEROXIDE/CN
 L3 62192 SEA FILE=HCAPLUS ABB=ON PLU=ON L2
 L4 62192 SEA FILE=HCAPLUS ABB=ON PLU=ON L1 OR L3
 L10 69238 SEA FILE=HCAPLUS ABB=ON PLU=ON OXIDATION CATALYSTS+NT, PFT/CT

L11 50797 SEA FILE=HCAPLUS ABB=ON PLU=ON STARCH+NT, PFT/CT
 L12 1 SEA FILE=REGISTRY ABB=ON PLU=ON STARCH/CN
 L13 49612 SEA FILE=HCAPLUS ABB=ON PLU=ON L12
 L14 50797 SEA FILE=HCAPLUS ABB=ON PLU=ON L11 OR L13
 L30 14405 SEA FILE=HCAPLUS ABB=ON PLU=ON COPPER SULFATE+NT, PFT/CT
 L31 1 SEA FILE=REGISTRY ABB=ON PLU=ON COPPER SULFATE/CN
 L32 14405 SEA FILE=HCAPLUS ABB=ON PLU=ON L31
 L33 14405 SEA FILE=HCAPLUS ABB=ON PLU=ON L30 OR L32
 L37 1228 SEA FILE=HCAPLUS ABB=ON PLU=ON L33 (L) CAT/RL
 L38 10 SEA FILE=HCAPLUS ABB=ON PLU=ON L37 AND L14
 L39 5 SEA FILE=HCAPLUS ABB=ON PLU=ON L38 AND L4
 L40 4 SEA FILE=HCAPLUS ABB=ON PLU=ON L39 AND L10

=> D QUE L46

L1 62192 SEA FILE=HCAPLUS ABB=ON PLU=ON HYDROGEN PEROXIDE/CT
 L2 1 SEA FILE=REGISTRY ABB=ON PLU=ON HYDROGEN PEROXIDE/CN
 L3 62192 SEA FILE=HCAPLUS ABB=ON PLU=ON L2
 L4 62192 SEA FILE=HCAPLUS ABB=ON PLU=ON L1 OR L3
 L8 359495 SEA FILE=HCAPLUS ABB=ON PLU=ON COPPER+NT, PFT/CT
 L11 50797 SEA FILE=HCAPLUS ABB=ON PLU=ON STARCH+NT, PFT/CT
 L12 1 SEA FILE=REGISTRY ABB=ON PLU=ON STARCH/CN
 L13 49612 SEA FILE=HCAPLUS ABB=ON PLU=ON L12
 L14 50797 SEA FILE=HCAPLUS ABB=ON PLU=ON L11 OR L13
 L43 6725 SEA FILE=HCAPLUS ABB=ON PLU=ON L8 (L) (CHLORIDE OR PHOSPHATE
 OR NITRATE OR ACETATE OR BROMIDE)
 L44 442 SEA FILE=HCAPLUS ABB=ON PLU=ON L43 (L) CAT/RL
 L45 8 SEA FILE=HCAPLUS ABB=ON PLU=ON L44 AND L4
 L46 0 SEA FILE=HCAPLUS ABB=ON PLU=ON L45 AND L14

=> D QUE L50

L1 62192 SEA FILE=HCAPLUS ABB=ON PLU=ON HYDROGEN PEROXIDE/CT
 L2 1 SEA FILE=REGISTRY ABB=ON PLU=ON HYDROGEN PEROXIDE/CN
 L3 62192 SEA FILE=HCAPLUS ABB=ON PLU=ON L2
 L4 62192 SEA FILE=HCAPLUS ABB=ON PLU=ON L1 OR L3
 L11 50797 SEA FILE=HCAPLUS ABB=ON PLU=ON STARCH+NT, PFT/CT
 L12 1 SEA FILE=REGISTRY ABB=ON PLU=ON STARCH/CN
 L13 49612 SEA FILE=HCAPLUS ABB=ON PLU=ON L12
 L14 50797 SEA FILE=HCAPLUS ABB=ON PLU=ON L11 OR L13
 L47 16736 SEA FILE=HCAPLUS ABB=ON PLU=ON (CUPRIC ACETATE+PFT OR CUPRIC
 BROMIDE+PFT OR CUPRIC CHLORIDE+PFT OR CUPRIC NITRATE+PFT) /CT
 L48 4236 SEA FILE=HCAPLUS ABB=ON PLU=ON L47 (L) CAT/RL
 L49 73 SEA FILE=HCAPLUS ABB=ON PLU=ON L48 AND L4
 L50 1 SEA FILE=HCAPLUS ABB=ON PLU=ON L49 AND L14

=> D QUE L55

L1 62192 SEA FILE=HCAPLUS ABB=ON PLU=ON HYDROGEN PEROXIDE/CT
 L2 1 SEA FILE=REGISTRY ABB=ON PLU=ON HYDROGEN PEROXIDE/CN
 L3 62192 SEA FILE=HCAPLUS ABB=ON PLU=ON L2
 L4 62192 SEA FILE=HCAPLUS ABB=ON PLU=ON L1 OR L3
 L11 50797 SEA FILE=HCAPLUS ABB=ON PLU=ON STARCH+NT, PFT/CT
 L12 1 SEA FILE=REGISTRY ABB=ON PLU=ON STARCH/CN
 L13 49612 SEA FILE=HCAPLUS ABB=ON PLU=ON L12
 L14 50797 SEA FILE=HCAPLUS ABB=ON PLU=ON L11 OR L13
 L51 5 SEA FILE=REGISTRY ABB=ON PLU=ON (CUPRIC ACETATE OR CUPRIC
 BROMIDE OR CUPRIC CHLORIDE OR CUPRIC NITRATE OR CUPRIC
 PHOSPHATE) /CN
 L52 16917 SEA FILE=HCAPLUS ABB=ON PLU=ON L51

L53 4268 SEA FILE=HCAPLUS ABB=ON PLU=ON L52 (L) CAT/RL
 L54 73 SEA FILE=HCAPLUS ABB=ON PLU=ON L53 AND L4
 L55 1 SEA FILE=HCAPLUS ABB=ON PLU=ON L54 AND L14

=> S L19 OR L22 OR L27 OR L28 OR L40 OR L50 OR L55
 L130 8 L19 OR L22 OR L27 OR L28 OR L40 OR L50 OR L55

=> FILE BIOSIS
 FILE 'BIOSIS' ENTERED AT 16:26:47 ON 12 JUN 2002
 COPYRIGHT (C) 2002 BIOLOGICAL ABSTRACTS INC. (R)

FILE COVERS 1969 TO DATE.
 CAS REGISTRY NUMBERS AND CHEMICAL NAMES (CNs) PRESENT
 FROM JANUARY 1969 TO DATE.

RECORDS LAST ADDED: 5 June 2002 (20020605/ED)

=> D QUE L61
 L56 33814 SEA FILE=BIOSIS ABB=ON PLU=ON H2O2 OR HYDROGENPEROXIDE OR
 HYDROGEN PEROXIDE OR HYDROGEN PER OXIDE
 L57 9421 SEA FILE=BIOSIS ABB=ON PLU=ON COPPER (3A) (ION? OR CATION?
 OR DIVALENT OR (II) OR "2+")
 L59 41167 SEA FILE=BIOSIS ABB=ON PLU=ON STARCH
 L60 107 SEA FILE=BIOSIS ABB=ON PLU=ON L59 (3A) OXIDI?
 L61 0 SEA FILE=BIOSIS ABB=ON PLU=ON L56 AND L57 AND L60

=> D QUE L62
 L56 33814 SEA FILE=BIOSIS ABB=ON PLU=ON H2O2 OR HYDROGENPEROXIDE OR
 HYDROGEN PEROXIDE OR HYDROGEN PER OXIDE
 L59 41167 SEA FILE=BIOSIS ABB=ON PLU=ON STARCH
 L60 107 SEA FILE=BIOSIS ABB=ON PLU=ON L59 (3A) OXIDI?
 L62 1 SEA FILE=BIOSIS ABB=ON PLU=ON (COPPER OR CUPRIC) AND L56 AND
 L60

=> D QUE L64
 L56 33814 SEA FILE=BIOSIS ABB=ON PLU=ON H2O2 OR HYDROGENPEROXIDE OR
 HYDROGEN PEROXIDE OR HYDROGEN PER OXIDE
 L59 41167 SEA FILE=BIOSIS ABB=ON PLU=ON STARCH
 L63 2 SEA FILE=BIOSIS ABB=ON PLU=ON (COPPER OR CUPRIC) AND L56 AND
 L59
 L64 1 SEA FILE=BIOSIS ABB=ON PLU=ON L63 NOT COPPER ZINC-SUPEROXIDE
 DISMUTASE

=> S L61 OR L64
 L131 1 L61 OR L64

=> FILE AGRICOLA
 FILE 'AGRICOLA' ENTERED AT 16:27:53 ON 12 JUN 2002

FILE COVERS 1970 TO 12 Jun 2002 (20020612/ED)

Compiled and distributed by the National Agricultural Library
 of the Department of Agriculture of the United States of
 America. It contains copyrighted material. All rights

reserved. (1996)

This file contains CAS Registry Numbers for easy and accurate substance identification.

=> D QUE L69

L65	6370	SEA FILE=AGRICOLA ABB=ON	PLU=ON	STARCH+NT, PFT/CT
L66	1813	SEA FILE=AGRICOLA ABB=ON	PLU=ON	HYDROGEN PEROXIDE/CT
L67	5756	SEA FILE=AGRICOLA ABB=ON	PLU=ON	COPPER+PFT/CT
L68	1	SEA FILE=AGRICOLA ABB=ON	PLU=ON	L65 AND L66 AND L67
L69	0	SEA FILE=AGRICOLA ABB=ON	PLU=ON	L68 NOT SUPEROXIDE DISMUTASE/CT

=> FILE CABAB

FILE 'CABA' ENTERED AT 16:28:10 ON 12 JUN 2002

COPYRIGHT (C) 2002 CAB INTERNATIONAL (CABI)

FILE COVERS 1973 TO 7 Jun 2002 (20020607/ED)

This file contains CAS Registry Numbers for easy and accurate substance identification.

=> D QUE L75

L70	32214	SEA FILE=CABA ABB=ON	PLU=ON	STARCH
L71	46975	SEA FILE=CABA ABB=ON	PLU=ON	COPPER OR CUPRIC OR CU
L72	7278	SEA FILE=CABA ABB=ON	PLU=ON	H2O2 OR HYDROGENPEROXIDE OR HYDROGEN PEROXIDE OR HYDROGEN PER OXIDE
L74	35	SEA FILE=CABA ABB=ON	PLU=ON	L70 (3A) OXIDI?
L75	0	SEA FILE=CABA ABB=ON	PLU=ON	L71 AND L72 AND L74

=> FILE JICST

FILE 'JICST-EPLUS' ENTERED AT 16:28:27 ON 12 JUN 2002

COPYRIGHT (C) 2002 Japan Science and Technology Corporation (JST)

FILE COVERS 1985 TO 11 JUN 2002 (20020611/ED)

THE JICST-EPLUS FILE HAS BEEN RELOADED TO REFLECT THE 1999 CONTROLLED TERM (/CT) THESAURUS RELOAD.

=> D QUE L81

L76	17195	SEA FILE=JICST-EPLUS ABB=ON	PLU=ON	STARCH
L77	62972	SEA FILE=JICST-EPLUS ABB=ON	PLU=ON	COPPER OR CUPRIC OR CU
L78	6750	SEA FILE=JICST-EPLUS ABB=ON	PLU=ON	H2O2 OR HYDROGENPEROXIDE OR HYDROGEN PEROXIDE OR HYDROGEN PER OXIDE
L80	70	SEA FILE=JICST-EPLUS ABB=ON	PLU=ON	L76 (3A) OXIDI?
L81	0	SEA FILE=JICST-EPLUS ABB=ON	PLU=ON	L77 AND L78 AND L80

=> FILE PAPERCHEM

FILE 'PAPERCHEM2' ENTERED AT 16:28:44 ON 12 JUN 2002

Paperchem2 compilation and indexing (C) 2002

Elsevier Engineering Information Inc. All rights reserved.

FILE COVERS 1967 TO 10 Jun 2002 (20020610/ED)

=> D QUE L87

L82	8845	SEA FILE=PAPERCHEM2 ABB=ON	PLU=ON	STARCH
L83	8597	SEA FILE=PAPERCHEM2 ABB=ON	PLU=ON	COPPER OR CUPRIC OR CU

L84 4376 SEA FILE=PAPERCHEM2 ABB=ON PLU=ON H2O2 OR HYDROGENPEROXIDE
 OR HYDROGEN PEROXIDE OR HYDROGEN PER OXIDE
 L86 865 SEA FILE=PAPERCHEM2 ABB=ON PLU=ON L82 (3A) OXIDI?
 L87 0 SEA FILE=PAPERCHEM2 ABB=ON PLU=ON L83 AND L84 AND L86

=> FILE TEXTILETECH
 FILE 'TEXTILETECH' ENTERED AT 16:29:02 ON 12 JUN 2002
 COPYRIGHT (C) 2002 Inst. of Textile Technology

FILE LAST UPDATED: 05 JUN 2002 <20020605/UP>
 FILE COVERS 1978 TO DATE.

=> D QUE L93
 L88 914 SEA FILE=TEXTILETECH ABB=ON PLU=ON STARCH
 L89 1208 SEA FILE=TEXTILETECH ABB=ON PLU=ON COPPER OR CUPRIC OR CU
 L90 1023 SEA FILE=TEXTILETECH ABB=ON PLU=ON H2O2 OR HYDROGENPEROXIDE
 OR HYDROGEN PEROXIDE OR HYDROGEN PER OXIDE
 L92 14 SEA FILE=TEXTILETECH ABB=ON PLU=ON L88 (3A) OXIDI?
 L93 0 SEA FILE=TEXTILETECH ABB=ON PLU=ON L89 AND L90 AND L92

=> FILE FROST FSTA
 FILE 'FROSTI' ENTERED AT 16:29:24 ON 12 JUN 2002
 COPYRIGHT (C) 2002 Leatherhead Food Research Association

FILE 'FSTA' ENTERED AT 16:29:24 ON 12 JUN 2002
 COPYRIGHT (C) 2002 International Food Information Service

=> D QUE L97
 L70 32214 SEA FILE=CABA ABB=ON PLU=ON STARCH
 L71 46975 SEA FILE=CABA ABB=ON PLU=ON COPPER OR CUPRIC OR CU
 L72 7278 SEA FILE=CABA ABB=ON PLU=ON H2O2 OR HYDROGENPEROXIDE OR
 HYDROGEN PEROXIDE OR HYDROGEN PER OXIDE
 L94 42347 SEA L70
 L95 13462 SEA L71
 L96 2918 SEA L72
 L97 4 SEA L94 AND L95 AND L96

=> FILE WPIDS
 FILE 'WPIDS' ENTERED AT 16:29:55 ON 12 JUN 2002
 COPYRIGHT (C) 2002 THOMSON DERWENT

FILE LAST UPDATED: 10 JUN 2002 <20020610/UP>
 MOST RECENT DERWENT UPDATE 200236 <200236/DW>
 DERWENT WORLD PATENTS INDEX SUBSCRIBER FILE, COVERS 1963 TO DATE

>>> The BATCH option for structure searches has been
 enabled in WPINDEX/WPIDS and WPIX >>>

>>> PATENT IMAGES AVAILABLE FOR PRINT AND DISPLAY >>>

>>> FOR DETAILS OF THE PATENTS COVERED IN CURRENT UPDATES,
 SEE [<<<](http://www.derwent.com/dwpi/updates/dwpicov/index.html)

>>> FOR A COPY OF THE DERWENT WORLD PATENTS INDEX TOOLS OF THE
 TRADE USER GUIDE, PLEASE VISIT:
[<<<](http://www.derwent.com/data/stn3.pdf)

>>> FOR INFORMATION ON ALL DERWENT WORLD PATENTS INDEX USER
GUIDES, PLEASE VISIT:
[<<<](http://www.derwent.com/userguides/dwpi_guide.html)

=> D QUE L103

L70	32214 SEA FILE=CABA ABB=ON PLU=ON STARCH
L99	202250 SEA FILE=WPIDS ABB=ON PLU=ON COPPER OR CUPRIC OR CU
L100	25710 SEA FILE=WPIDS ABB=ON PLU=ON H2O2 OR HYDROGENPEROXIDE OR HYDROGEN PEROXIDE OR HYDROGEN PER OXIDE
L102	612 SEA FILE=WPIDS ABB=ON PLU=ON L70 (3A) OXIDI?
L103	2 SEA FILE=WPIDS ABB=ON PLU=ON L99 AND L100 AND L102

=> D QUE L105

L70	32214 SEA FILE=CABA ABB=ON PLU=ON STARCH
L99	202250 SEA FILE=WPIDS ABB=ON PLU=ON COPPER OR CUPRIC OR CU
L100	25710 SEA FILE=WPIDS ABB=ON PLU=ON H2O2 OR HYDROGENPEROXIDE OR HYDROGEN PEROXIDE OR HYDROGEN PER OXIDE
L104	8932 SEA FILE=WPIDS ABB=ON PLU=ON L99 (5A) CATAL?
L105	3 SEA FILE=WPIDS ABB=ON PLU=ON L70 AND L100 AND L104

=> D QUE L108

L70	32214 SEA FILE=CABA ABB=ON PLU=ON STARCH
L99	202250 SEA FILE=WPIDS ABB=ON PLU=ON COPPER OR CUPRIC OR CU
L100	25710 SEA FILE=WPIDS ABB=ON PLU=ON H2O2 OR HYDROGENPEROXIDE OR HYDROGEN PEROXIDE OR HYDROGEN PER OXIDE
L106	24692 SEA FILE=WPIDS ABB=ON PLU=ON L99 (3A) (ION? OR CATION? OR DIVALENT OR (II) OR "2+")
L107	7 SEA FILE=WPIDS ABB=ON PLU=ON L70 AND L100 AND L106
L108	3 SEA FILE=WPIDS ABB=ON PLU=ON L107 AND STARCH/TI

=> D QUE L111

L98	38445 SEA FILE=WPIDS ABB=ON PLU=ON STARCH
L99	202250 SEA FILE=WPIDS ABB=ON PLU=ON COPPER OR CUPRIC OR CU
L100	25710 SEA FILE=WPIDS ABB=ON PLU=ON H2O2 OR HYDROGENPEROXIDE OR HYDROGEN PEROXIDE OR HYDROGEN PER OXIDE
L101	17 SEA FILE=WPIDS ABB=ON PLU=ON L98 AND L99 AND L100
L109	81463 SEA FILE=WPIDS ABB=ON PLU=ON OXID? AND CATAL?
L110	5 SEA FILE=WPIDS ABB=ON PLU=ON L101 AND L109
L111	4 SEA FILE=WPIDS ABB=ON PLU=ON L110 AND STARCH/TI

=> S L103 OR L105 OR L108 OR L111

L132 6 L103 OR L105 OR L108 OR L111

=> FILE COPPERLIT

FILE 'COPPERLIT' ENTERED AT 16:31:35 ON 12 JUN 2002
COPYRIGHT (C) 2002 Copper Development Association Inc. (CDA)

FILE LAST UPDATED: 11 APR 2002 <20020411/UP>

FILE COVERS 1965 TO DATE

>>> Simultaneous left and right truncation available in
the Basic Index <<<

=> D QUE L119

L112	16 SEA FILE=COPPERLIT ABB=ON PLU=ON STARCH
L119	0 SEA FILE=COPPERLIT ABB=ON PLU=ON L112 AND OXIDI?

=> FILE MEDLINE

FILE 'MEDLINE' ENTERED AT 16:31:53 ON 12 JUN 2002

FILE LAST UPDATED: 11 JUN 2002 (20020611/UP). FILE COVERS 1958 TO DATE.

On June 9, 2002, MEDLINE was reloaded. See HELP RLOAD for details.

MEDLINE thesauri in the /CN, /CT, and /MN fields incorporate the MeSH 2002 vocabulary. Enter HELP THESAURUS for details.

THIS FILE CONTAINS CAS REGISTRY NUMBERS FOR EASY AND ACCURATE SUBSTANCE IDENTIFICATION.

=> D QUE L125

L120	14807 SEA FILE=MEDLINE ABB=ON	PLU=ON	STARCH+NT, PFT/CT
L122	26488 SEA FILE=MEDLINE ABB=ON	PLU=ON	COPPER/CT
L123	17199 SEA FILE=MEDLINE ABB=ON	PLU=ON	HYDROGEN PEROXIDE/CT
L124	74 SEA FILE=MEDLINE ABB=ON	PLU=ON	L120 AND L122
L125	0 SEA FILE=MEDLINE ABB=ON	PLU=ON	L124 AND L123

=> D QUE L127

L120	14807 SEA FILE=MEDLINE ABB=ON	PLU=ON	STARCH+NT, PFT/CT
L123	17199 SEA FILE=MEDLINE ABB=ON	PLU=ON	HYDROGEN PEROXIDE/CT
L126	4278 SEA FILE=MEDLINE ABB=ON	PLU=ON	COPPER (3A) (ION? OR CATION? OR DIVALENT OR II OR "2+")
L127	0 SEA FILE=MEDLINE ABB=ON	PLU=ON	L120 AND L123 AND L126

=> D QUE L129

L120	14807 SEA FILE=MEDLINE ABB=ON	PLU=ON	STARCH+NT, PFT/CT
L123	17199 SEA FILE=MEDLINE ABB=ON	PLU=ON	HYDROGEN PEROXIDE/CT
L128	1335 SEA FILE=MEDLINE ABB=ON	PLU=ON	CUPRIC
L129	0 SEA FILE=MEDLINE ABB=ON	PLU=ON	L120 AND L123 AND L128

=> DUP REM L97 L131 L130 L132

FILE 'FROSTI' ENTERED AT 16:33:31 ON 12 JUN 2002

COPYRIGHT (C) 2002 Leatherhead Food Research Association

FILE 'FSTA' ENTERED AT 16:33:31 ON 12 JUN 2002

COPYRIGHT (C) 2002 International Food Information Service

FILE 'BIOSIS' ENTERED AT 16:33:31 ON 12 JUN 2002

COPYRIGHT (C) 2002 BIOLOGICAL ABSTRACTS INC. (R)

FILE 'HCAPLUS' ENTERED AT 16:33:31 ON 12 JUN 2002

USE IS SUBJECT TO THE TERMS OF YOUR STN CUSTOMER AGREEMENT.

PLEASE SEE "HELP USAGETERMS" FOR DETAILS.

COPYRIGHT (C) 2002 AMERICAN CHEMICAL SOCIETY (ACS)

FILE 'WPIDS' ENTERED AT 16:33:31 ON 12 JUN 2002

COPYRIGHT (C) 2002 THOMSON DERWENT

PROCESSING COMPLETED FOR L97

PROCESSING COMPLETED FOR L131

PROCESSING COMPLETED FOR L130

PROCESSING COMPLETED FOR L132

L133 16 DUP REM L97 L131 L130 L132 (3 DUPLICATES REMOVED)

=> D IBIB AB 1-16

L133 ANSWER 1 OF 16 HCPLUS COPYRIGHT 2002 ACS
 ACCESSION NUMBER: 2001:174097 HCPLUS
 DOCUMENT NUMBER: 134:209580
 TITLE: Oxidized starch derivatives and their manufacture by acidic roasting
 INVENTOR(S): Hinako, Toshio; Ishida, Mitsuo
 PATENT ASSIGNEE(S): Oji Corn Starch Co., Ltd., Japan
 SOURCE: Jpn. Kokai Tokkyo Koho, 6 pp.
 CODEN: JKXXAF
 DOCUMENT TYPE: Patent
 LANGUAGE: Japanese
 FAMILY ACC. NUM. COUNT: 1
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 2001064302	A2	20010313	JP 1999-239930	19990826

AB The starch derivs. are manufd. by roasting mixts. (water content .1toreq.30%) of starch, H₂O₂, and metal catalysts under acidic conditions. Thus, a mixt. (H₂O content .1toreq.12%) contg. corn starch, H₂O₂, H₂SO₄, and CuSO₄ was roasted at 80.degree. for 60 min to give a starch deriv. showing aldehyde content 0.07%, reduced carboxyl content, and good storage stability and water insol.

L133 ANSWER 2 OF 16 WPIDS (C) 2002 THOMSON DERWENT
 ACCESSION NUMBER: 2001-267107 [28] WPIDS
 DOC. NO. CPI: C2001-081074
 TITLE: Oxidation of di- or poly-saccharide in aqueous solution or slurry, e.g. for production of oxidized starch, involves reaction with hydrogen peroxide activated on a heterogeneous catalyst in the reaction mixture.
 DERWENT CLASS: D25 E13 F09
 INVENTOR(S): RAPTHEL, I
 PATENT ASSIGNEE(S): (MOLK-N) MOL KATALYSATORTECHNIK GMBH
 COUNTRY COUNT: 1
 PATENT INFORMATION:

PATENT NO	KIND	DATE	WEEK	LA	PG
DE 19960950	A1	20010301	(200128)*		4
DE 19960950	C2	20010823	(200148)		

APPLICATION DETAILS:

PATENT NO	KIND	APPLICATION	DATE
DE 19960950	A1	DE 1999-19960950	19991217
DE 19960950	C2	DE 1999-19960950	19991217

PRIORITY APPLN. INFO: DE 1999-19939927 19990823

AB DE 19960950 A UPAB: 20010522
 NOVELTY - Process for the oxidation of disaccharides in aqueous solution or slurry, in which the oxidizing agent used is hydrogen peroxide activated on a heterogeneous catalyst in the reaction solution with the formation of hydroxyl

(OH) radicals.

DETAILED DESCRIPTION - An INDEPENDENT CLAIM is also included for a similar process for the oxidation of polysaccharides.

USE - The use of specified catalysts for the oxidation of di- or poly-saccharides in aqueous solution or slurry with an oxidizing agent, especially hydrogen peroxide, is claimed. The products (with carboxyl groups etc.) are used e.g. in the paper industry and as co-builders instead of phosphates in detergents.

ADVANTAGE - An economical, chlorine-free process for the oxidation of di- or poly-saccharides with good space-time yields and no interfering by-products. The process can be operated so that the hydrogen peroxide is completely consumed, but any unreacted peroxide can also easily be removed.

Dwg. 0/0

L133 ANSWER 3 OF 16 HCAPLUS COPYRIGHT 2002 ACS DUPLICATE 1
 ACCESSION NUMBER: 2000:191115 HCAPLUS
 DOCUMENT NUMBER: 132:224042
 TITLE: Hydrogen peroxide oxidation of starch
 INVENTOR(S): Kesselmans, Ronald Peter Wilhelmus; Bleeker, Ido Pieter
 PATENT ASSIGNEE(S): Cooperatieve Verkoop- En Productievereniging Van Aardappelmeel En Derivaten, Neth.
 SOURCE: PCT Int. Appl., 23 pp.
 CODEN: PIXXD2
 DOCUMENT TYPE: Patent
 LANGUAGE: English
 FAMILY ACC. NUM. COUNT: 1
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2000015670	A1	20000323	WO 1999-NL568	19990913
W:	AE, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CR, CU, CZ, DE, DK, DM, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, UA, UG, US, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM			
RW:	GH, GM, KE, LS, MW, SD, SL, SZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG			
AU 9956562	A1	20000403	AU 1999-56562	19990913
BR 9913581	A	20010522	BR 1999-13581	19990913
EP 1112287	A1	20010704	EP 1999-943485	19990913
R:	AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO			

PRIORITY APPLN. INFO.:	EP 1998-203043	A 19980911
	WO 1999-NL568	W 19990913
AB	A root or tuber starch, comprising >95% (based on dry starch) of amylopectin, or a deriv. of such starch is treated with H ₂ O ₂ in the presence of Cu ²⁺ ion catalyst. Under the process condition cereal and fruit starches are not degraded to a sufficient extent to obtain a product having desired characteristics. The use of oxidized starch as binder in paper coatings, in surface sizes and adhesives, as food additive and emulsifier for paper sizing agents is claimed.	
REFERENCE COUNT:	6	THERE ARE 6 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L133 ANSWER 4 OF 16 FROSTI COPYRIGHT 2002 LFRA
 ACCESSION NUMBER: 559653 FROSTI
 TITLE: Oxidation of starch.
 INVENTOR: Kesselmans R.P.W.; Bleeker I.P.
 PATENT ASSIGNEE: Avebe Corp. Verkoop Prod.
 SOURCE: European Patent Application
 PATENT INFORMATION: EP 1112287 A1 20000323
 APPLICATION INFORMATION: 19990913
 PRIORITY INFORMATION: European Patent Office 19980911
 NOTE: 20000323
 DOCUMENT TYPE: Patent
 LANGUAGE: English
 SUMMARY LANGUAGE: English

AB A process is given for the oxidation of starch to reduce its viscosity in solution or dispersion. A root or tuber starch, comprising at least 95% by weight amylopectin starch or derivatives, is treated with hydrogen peroxide in the presence of divalent copper ions as catalyst. A high reaction rate is achieved and a starch of high stability is obtained.

L133 ANSWER 5 OF 16 FROSTI COPYRIGHT 2002 LFRA
 ACCESSION NUMBER: 523374 FROSTI
 TITLE: Oxidation of starch.
 INVENTOR: Kesselmans R.P.W.; Bleeker I.P.
 PATENT ASSIGNEE: Avebe Corp. Verkoop Prod.
 SOURCE: PCT Patent Application
 PATENT INFORMATION: WO 2000015670 A1 20000323
 APPLICATION INFORMATION: 19990913
 PRIORITY INFORMATION: European Patent Office 19980911
 NOTE: 20000323
 DOCUMENT TYPE: Patent
 LANGUAGE: English
 SUMMARY LANGUAGE: English

AB A process is given for the oxidation of starch to reduce its viscosity in solution or dispersion. A root or tuber starch, comprising at least 95% by weight amylopectin starch or derivatives, is treated with hydrogen peroxide in the presence of divalent copper ions as catalyst. A high reaction rate is achieved and a starch of high stability is obtained.

L133 ANSWER 6 OF 16 HCPLUS COPYRIGHT 2002 ACS DUPLICATE 2
 ACCESSION NUMBER: 1999:194186 HCPLUS
 DOCUMENT NUMBER: 130:239098
 TITLE: Manufacture of stable, chlorine-free modified starch
 INVENTOR(S): Ketola, Hannu; Hagberg, Peggy
 PATENT ASSIGNEE(S): Raisio Chemicals Oy, Finland
 SOURCE: PCT Int. Appl., 23 pp.
 CODEN: PIXXD2
 DOCUMENT TYPE: Patent
 LANGUAGE: English
 FAMILY ACC. NUM. COUNT: 1
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 9912977	A1	19990318	WO 1998-FI684	19980902
W:	AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ, DE, DK, EE, ES, FI, GB, GE, GH, GM, HR, HU, ID, IL, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT,			

UA, UG, US, UZ, VN, YU, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM
 RW: GH, GM, KE, LS, MW, SD, SZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES,
 FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI,
 CM, GA, GN, GW, ML, MR, NE, SN, TD, TG

FI 9703651 A 19990311 FI 1997-3651 19970910

CA 2302567 AA 19990318 CA 1998-2302567 19980902

AU 9890737 A1 19990329 AU 1998-90737 19980902

EP 1015497 A1 20000705 EP 1998-942702 19980902

R: AT, BE, CH, DE, DK, ES, FR, GB, IT, LI, NL, SE, PT, SI, FI

PRIORITY APPLN. INFO.: FI 1997-3651 A 19970910

WO 1998-FI684 W 19980902

AB A title starch, useful as binder in paper coating pastes and for surface sizing of paper, is manufd. by degrading the starting material, e.g., potato starch by oxidn. with H₂O₂ in the presence of Cu catalyst, and stabilizing the oxidized starch by acetylation combined with crosslinking. A typical title starch was manufd. by oxidizing potato starch with H₂O₂ in aq. suspension at 40.degree. and pH 10 in the presence of 0.015% CuSO₄, and acetylating with simultaneous crosslinking the product by reacting for 2 h at pH 8-9 with Ac₂O contg. 0.15% adipic acid.

REFERENCE COUNT: 3 THERE ARE 3 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L133 ANSWER 7 OF 16 HCPLUS COPYRIGHT 2002 ACS

ACCESSION NUMBER: 1997:490992 HCPLUS

DOCUMENT NUMBER: 127:163408

TITLE: Oxidation of starch by peroxides in aqueous media

INVENTOR(S): Jinho, Masafumi; Sumitani, Makoto

PATENT ASSIGNEE(S): Mitsubishi Gas Chemical Co., Inc., Japan

SOURCE: Jpn. Kokai Tokkyo Koho, 3 pp.

CODEN: JKXXAF

DOCUMENT TYPE: Patent

LANGUAGE: Japanese

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 09188704	A2	19970722	JP 1996-2297	19960110

AB Aq. media contg. starch are changed into a size, i.e., a high-viscosity mixt., by heating at a temp. higher than the temp. (T) at which a rapid viscosity increase sets in, then cooling at a temp. lower than T, and treating with peroxides in the presence of catalysts to give carboxy-contg. starch applicable, e.g., as scale inhibitors, pigment dispersants, or detergent builders showing redn. of corrosion of the containers caused by the peroxides. Thus, 10.0 g (dry) corn starch was suspended in 178 mL H₂O, mixed with 50 mg CuSO₄.5H₂O, stirred at 72.degree. for 10 min, heated at 80.degree. for 21 min, cooled to 45.degree. for 25 min, treated with 12.3 g 35% H₂O₂ for 2.5 h, mixed with aq. NaOH to control pH at 8.5-9, subjected to removal of the catalyst, and mixed with EtOH to ppt. the product, which was freeze-dried to give a title material.

L133 ANSWER 8 OF 16 HCPLUS COPYRIGHT 2002 ACS

ACCESSION NUMBER: 1998:125820 HCPLUS

DOCUMENT NUMBER: 128:155757

TITLE: Effect of oxidizing agents on quality of corn starch adhesive

AUTHOR(S): Zhai, Guangyu

CORPORATE SOURCE: The Medical School Affiliated to Henan Medical University, Zhengzhou, 450052, Peop. Rep. China

SOURCE: Huaxue Yu Nianhe (1997), (4), 237-239
 CODEN: HYZHENG; ISSN: 1001-0017
 PUBLISHER: Huaxue Yu Nianhe Bianjibu
 DOCUMENT TYPE: Journal
 LANGUAGE: Chinese
 AB Effects of pH, temp., and catalyst on oxidn. of corn starch with KMnO₄, H₂O₂, and NaClO and the storage life of the corn starch adhesive were studied. The oxidizing ability of the oxidizing agents was enhanced with increasing temp. for all the 3 oxidizing agents, and with decreasing pH for KMnO₄ and H₂O₂, but with increasing pH for NaClO. The storage stability was the best when H₂O₂ was used.

L133 ANSWER 9 OF 16 FROSTI COPYRIGHT 2002 LFRA
 ACCESSION NUMBER: 447998 FROSTI
 TITLE: Water soluble oxidized **starches** by peroxide reactive extrusion.
 AUTHOR: Wing R.E.; Willett J.L.
 SOURCE: Industrial Crops and Products, 1997, (October), 7 (1), 45-52 (24 ref.)
 DOCUMENT TYPE: Journal
 LANGUAGE: English
 SUMMARY LANGUAGE: English
 AB Reactive extrusion of **starch** has been used successfully to yield products with improved reaction efficiency and solubility. In this study, oxidized **starches** were prepared via reactive extrusion. Oxidation of **starches** with different amylose content to increase water solubility was examined. Three types of corn **starches** containing up to 70% amylose were oxidized by a reactive extrusion using **hydrogen peroxide** and a ferrous-cupric sulfate catalyst. Drum drying allowed rapid recovery of product. Increasing the peroxide level was found to increase oxidation and solubility. **Starches** with higher amylose content gave reduced solubility, but higher carboxyl content than those with low amylose content. Soluble products had solution viscosities comparable to maltodextrins of dextrose equivalent 5-10.

L133 ANSWER 10 OF 16 BIOSIS COPYRIGHT 2002 BIOLOGICAL ABSTRACTS INC.DUPLICATE
 3
 ACCESSION NUMBER: 1995:106705 BIOSIS
 DOCUMENT NUMBER: PREV199598121005
 TITLE: Oxidation of potato **starch** by **hydrogen peroxide**.
 AUTHOR(S): Parovuori, Petteri (1); Hamunen, Antti; Forssell, Pirkko (1); Autio, Karin (1); Poutanen, Kaisa (1)
 CORPORATE SOURCE: VTT Biotechnol. Food Res., PO Box 1500, 02044 VTT, Espoo Finland
 SOURCE: Starch, (1995) Vol. 47, No. 1, pp. 19-23.
 ISSN: 0038-9056.
 DOCUMENT TYPE: Article
 LANGUAGE: English
 SUMMARY LANGUAGE: English; German
 AB Potato **starch** was oxidized by **hydrogen peroxide** in alkaline and acidic reaction conditions with copper, iron and tungstate catalysts in order to introduce carboxyl and carbonyl groups to the **starch** molecule. Carbonyl contents up to 6.6 per 100 glucose units could be obtained, whereas carboxyl content remained low (up to 1.4). **Starch** yields in the alkaline and acidic reactions were 90 and 99%, respectively. The molecular weight decreased markedly with the degree of oxidation, and was dependent on the catalyst used. Rheological measurements revealed that when the

molecular weight of the moderately oxidized starch was high, a very firm gel ($G' = 40\text{ kPa}$) was obtained with 25% starch concentration. When the degree of oxidation increased, the storage modulus G' decreased. The more the oxidized starch contained carbonyl groups, the higher was the gelatinization temperature.

L133 ANSWER 11 OF 16 FSTA COPYRIGHT 2002 IFIS
 ACCESSION NUMBER: 1995(05):L0016 FSTA
 TITLE: Oxidation of potato starch by hydrogen peroxide.
 AUTHOR: Parovuori, P.; Hamunen, A.; Forssell, P.; Autio, K.; Poutanen, K.
 CORPORATE SOURCE: VTT Biotech. & Food Res., PO Box 1500, 02044 VTT, Espoo, Finland
 SOURCE: Starch/Staerke, (1995) 47 (1) 19-23, 21 ref.
 ISSN: 0038-9056
 DOCUMENT TYPE: Journal
 LANGUAGE: English
 AB ~ Potato starch was oxidized by hydrogen peroxide in alkaline and acidic reaction conditions with copper, iron, and tungstate catalysts in order to introduce carboxyl and carbonyl groups to the starch molecule. Carbonyl contents up to 6.6 per 100 glucose units could be obtained, whereas carboxyl content remained low (up to 1.4). Starch yields in the alkaline and acidic reactions were 90 and 99%, respectively. The mol. wt. decreased markedly with the degree of oxidation and was dependent on the catalyst used. Rheological measurements revealed that when the mol. wt. of moderately oxidized starch was high, a very firm gel ($G' = 40\text{ kPa}$) was obtained with 25% starch concn. When the degree of oxidation increased, the storage modulus G' decreased. The gelatinization temp. increased with increasing numbers of carbonyl groups in the oxidized starch.

L133 ANSWER 12 OF 16 HCAPLUS COPYRIGHT 2002 ACS
 ACCESSION NUMBER: 1985:454387 HCAPLUS
 DOCUMENT NUMBER: 103:54387
 TITLE: Effects of iron, copper, and chromate ions on the oxidative degradation of cellulose model compounds
 AUTHOR(S): Blattner, Regine; Ferrier, Robert J.
 CORPORATE SOURCE: Dep. Chem., Victoria Univ., Wellington, N. Z.
 SOURCE: Carbohydr. Res. (1985), 138(1), 73-82
 CODEN: CRBRAT; ISSN: 0008-6215
 DOCUMENT TYPE: Journal
 LANGUAGE: English
 AB Fe(II) and Fe(III) ions promote the degrdn. of the cellulose model 1,5-anhydrocellobitol by oxygen or H_2O_2 ; Cu and chromate ions have marked and different effects on the Fe catalysis. With starch, Fe promotes the H_2O_2 -induced reaction and Cu and chromate ions further enhance the reaction rate. The tensile strength of paperboard is reduced by the action of H_2O_2 and Fe(II) salts, and mixts. of Cu, chromate, and arsenate salts (CCA, a timber preservative) also promoted degrdn. in the presence or absence of Fe ions. The oxidn. of 1,5-anhydrocellobitol by oxygen in the presence of Fe ions is strongly inhibited by CCA and by cetyltrimethylammonium chloride, and is accelerated by phenols and related compds.

L133 ANSWER 13 OF 16 WPIDS (C) 2002 THOMSON DERWENT
 ACCESSION NUMBER: 1982-28997E [15] WPIDS
 TITLE: High dry material content starch glue - prep'd. by stein-hall method with decomposition of gelatinised

starch using a water-soluble oxidant,
esp. sodium perborate.

DERWENT CLASS: G03
 INVENTOR(S): VISSER, R J
 PATENT ASSIGNEE(S): (CORP) CPC INT INC
 COUNTRY COUNT: 13
 PATENT INFORMATION:

PATENT NO	KIND	DATE	WEEK	LA	PG
EP 49009	A	19820407	(198215)*	EN	7
R: DE FR GB IT NL SE					
NO 8103054	A	19820413	(198218)		
NL 8005184	A	19820416	(198219)		
FI 8102819	A	19820430	(198220)		
DK 8104026	A	19820503	(198221)		
JP 57080468	A	19820520	(198226)		
BR 8107012	A	19830531	(198328)		
CA 1165059	A	19840410	(198419)		
EP 49009	B	19860416	(198616)	EN	
R: DE FR GB IT NL SE					
DE 3174400	G	19860522	(198622)		
KR 8801393	B	19880730	(198848)		

PRIORITY APPLN. INFO: NL 1980-5184 19800917

AB EP 49009 A UPAB: 19930915

Prepn. of a novel starch glue contg. 20-45 wt.% starch (as dry material) is carried out by a modified Stein-Hall method. The Stein-Hall method comprises gelatinisation of a part of the starch in water in an alkaline medium, followed by addn. of the rest of the water and starch and, if desired, the usual additives (esp. boran cpds. and/or resins for water-resistant glues) under such conditions that nogelatinisation occurs. In the modified process the gelatinised starch is decomposed by addn. of a water-sol. oxidant in situ at 10-100 (pref. 50-95) deg. C at atmos. pressure.

The starch is pref. native starch and the oxidant is pref. added to the mixt. during the first phase of gelatinisation of a part of the starch in the alkaline medium.

The water-sol. oxidant is pref. a hypochlorite, perborate, persulphate, bromate or H₂O₂, opt. used together with a catalyst. The pref. oxidant is Na perborate used together with a Cu sulphate catalyst.

The glue can be prep'd. in situ by the user (e.g. corrugated cardboard manufacturer) using an open container. Only a thin layer of the glue need be applied to obtain the same adhesion as with prior art glues. Since there is less water to be evpd., the cardboard mfg. machine can be run at higher speeds.

L133 ANSWER 14 OF 16 HCAPLUS COPYRIGHT 2002 ACS
 ACCESSION NUMBER: 1976:562290 HCAPLUS
 DOCUMENT NUMBER: 85:162290
 TITLE: Peroxide thinning granular starch
 INVENTOR(S): Lotzgesell, James A.; Moser, Kenneth B.; Hurst, Thomas L.
 PATENT ASSIGNEE(S): Staley, A. E., Mfg. Co., USA
 SOURCE: U.S., 7 pp.
 CODEN: USXXAM
 DOCUMENT TYPE: Patent

LANGUAGE: English

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 3975206	A	19760817	US 1974-524727	19741118

AB Modifying granular starch (I) [9005-25-8] or hydroxyethyl starch [9005-27-0] with H₂O₂ in the presence of metal ion and in the absence of buffering agents increased their alkali fluidities. Thus, thinning corn I with 0.23% H₂O₂ and 0.03% FeSO₄.4H₂O based on I wt. at pH 3.2, until all of H₂O₂ was used up, gave product with alkali fluidity of 71 ml.

L133 ANSWER 15 OF 16 WPIDS (C) 2002 THOMSON DERWENT

ACCESSION NUMBER: 1976-11080X [06] WPIDS

TITLE: Depolymsn of granular starch - by reaction with hydrogen peroxide in neutral aq soln contg cupric ions and alkali metal- or ammonium chloride.

DERWENT CLASS: A11 A97 D17

PATENT ASSIGNEE(S): (STBR) STANDARD BRANDS INC

COUNTRY COUNT: 2

PATENT INFORMATION:

PATENT NO	KIND	DATE	WEEK	LA	PG
US 3935187	A	19760127	(197606)*		
CA 1036594	A	19780815	(197835)		

PRIORITY APPLN. INFO: US 1973-408030 19731019; US 1974-496609
19740812

AB US 3935187 A UPAB: 19930901

Granular starch is depolymerised by reacting it with H₂O₂ in an aq. mixt. in the presence of cupric ions and an alkali metal or ammonium chloride while maintaining the pH of the aq. mixt. at 5.5-7.0 by the addition of alkali, the reaction conditions being such as to maintain the granular structure of the starch. Prod. is readily susceptible to pasting on gelatinisation, and films formed from it have good clarity. Prod. is esp. useful in papermaking.

L133 ANSWER 16 OF 16 WPIDS (C) 2002 THOMSON DERWENT

ACCESSION NUMBER: 1972-28635T [18] WPIDS

TITLE: Hydrogen peroxide thinning agent - with copper ion in prep of starch ester.

DERWENT CLASS: A11 D17

PATENT ASSIGNEE(S): (GRAI) GRAIN PROCESSING CORP

COUNTRY COUNT: 1

PATENT INFORMATION:

PATENT NO	KIND	DATE	WEEK	LA	PG
US 3655644	A		(197218)*		

PRIORITY APPLN. INFO: US 1970-43211 19700603

AB US 3655644 A UPAB: 19930000

The ester is obtd. by treating an aq. starch slurry at 80 degrees-130 degrees F and pH 7-12 with 0.1-3.0 wt.% H₂O₂ (relative to the starch) and 5-100 pts. wt. Cu²⁺/1,000,000 pts. wt. starch. Excess H₂O₂ is removed by a reducing agent and an acylating agent is added to produce the thinned starch ester. The ester has a superior colour and the process has teh advantages that derivatization, thinning and bleaching are conducted in the same equipment without the need of acid-resistant appts., yields are higher and filterability is improved.